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WORLD AGRICULTURAL Situation



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THE WORLD AGRICULTURAL SITUATION

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Approved by
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Detailed statements on the agricultural situation in the world's major regions will be published in the spring of 1974.

SUMMARY

World agricultural production (excluding communist Asia) rose about 6 percent to a record high in 1973, recovering from the poor harvest of 1972. Improved weather was mainly responsible, and the Asian monsoon was particularly favorable. Production rose notably in the United States, Canada, the USSR, India, Latin America, and Oceania.

World food production (excluding communist Asia) rose to a new high in 1973, and per capita output of food equaled the record high of 1971. Total production rose about equally in the developed and less developed countries. However, because population increased much faster in the less developed countries, they had smaller increases in per capita food production.

Prices rose sharply for all agricultural commodities in international trade. Prices of soybean meal led the rise, with the U.S. export value doubling. Prices of soybeans, wheat, feed grains, rice, inedible tallow, and cattle hides also rose sharply. The price index for U.S. agricultural imports rose only about half as fast as that for exports. Stocks depletions made prices more sensitive to production developments and resulted in greatly increased forward buying of commodities.

The realignment of the U.S. dollar, rapid economic growth in the developed countries, and strengthening of the foreign exchange reserve positions of a number of less developed countries have generally boosted the demand for U.S. agricultural commodities. As a result of the U.S. dollar's realignment, prices for U.S. commercial exports (expressed in foreign currencies) are, on the average, 9 percent lower than they otherwise would have been—and are 13 to 20 percent lower for U.S. feed grain and soybean exports.

U.S. exports of farm products climbed to a record \$12.9 billion in fiscal 1973, 60 percent higher than in fiscal 1972. Increased volume accounted for 60 percent of the total value gain and higher prices for the remainder. Grains and grain products accounted for about half of the increased value of agricultural exports.

For fiscal 1974 the value of agricultural exports may reach a new high of \$19 billion, although the energy crisis may have a dampening effect. Most of the increase will stem from higher prices, especially for wheat, feed grains, rice, soybeans, soybean meal, cotton, and some horticultural products. However, average export prices for most commodities will probably be substantially below the peak levels that occurred in the late summer of 1973. Prices will continue to be quite sensitive to changes in

production, stocks, and events on the international scene. U.S. agricultural imports should also rise in fiscal 1974, to a level well above the record \$7.3 billion in fiscal 1973.

U.S. negotiations with the European Community over losses of trading rights suffered by the United States because of enlargement of the Community are at an intermediate stage. Multilateral talks within the General Agreement on Tariffs and Trade are underway to explore avenues to eliminating or reducing roadblocks to agricultural and industrial trade, especially nontariff barriers. Negotiations could be lengthy because of the difficult economic and political questions involved.

World grain prospects for 1973/74 point to record crops. Supplies of grain will be adequate to allow increases in total and per capita disappearance. Rice supplies are the tightest among major commodities, wheat supplies are next in line, and coarse grains are in the most relaxed position. Supplies are likely to remain relatively tight through 1973/74 and well into 1974/75. Increases in grain carryover stocks of the major exporting countries may not occur before the end of the 1974/75 season.

Grain and protein feed prices have been fluctuating widely at record levels. The short crops last year, uncertainty about this year's crop prospects, low stocks, and the effect of major currency realignments have been primarily responsible for the unusual market behavior. Many countries last summer used embargoes, quotas, export taxes, and other means to restrict exports as protection for domestic supplies. A few countries where restrictions have been or are still imposed are: The United States and Brazil for soybeans; Thailand, Burma, and the European Community for rice; Argentina and the European Community for wheat; and Brazil and Thailand for corn.

The tight oilseed meal supply-demand situation will likely loosen considerably in 1974. Total meal production is expected to increase over 9 million tons while consumption increases by only 4 million tons. Three-fifths of the increase in production will come from the United States, but less than one-fourth of the consumption increase. Brazil's meal output should be up nearly a million tons, almost entirely from increased soybean production, and Peru's improved fishing prospects suggest a possible doubling of its fishmeal production from last year's low level. The USSR will produce more meal from increased sunflower production, and India will likely produce and export more peanut meal during 1974.

The world oilseed meal supply is expected to exceed demand by about 4 percent, implying prices will tend to moderate during the year. However, a major effort to rebuild stocks could cause pressure on available supplies and result in little or no downward price adjustment. Therefore, while exportable supplies will be available in 1974, prices may be relatively high

throughout much of the year.

World production of meat in 1973 showed little gain in total and even declined on a per capita basis. Beef herds have been expanding in the major producing areas, and beef production is expected to resume expansion. A recovery in world pork production is expected in 1974. In 1972 and 1973, production of meat leveled off or declined in both the United States and the European Community, and strong demand lifted prices. Both regions found imports insufficient to keep domestic meat consumption from falling.

Total milk production in major dairy countries in 1973 is estimated to be about the same as in 1972. In 1973 a million-ton decline in U.S. output was offset by an equivalent increase in the European Community. Some further small decline in U.S. output is expected in 1974, but increases in other major producing countries will more than offset. World export supplies will be sufficient to meet traditional import demands even if the United States continues in 1974 to import at 1973's high levels.

World cotton production in 1973/74 is expected to increase more than enough to cover anticipated world demand. Output fell in the United States, Pakistan, Mexico, and Turkey in 1973, but increases in the People's Republic of China, the USSR, India, and Central America more than compensated for the declines. Stocks, however, remain low relative to increasing consumption. World mill use of cotton has risen sharply over the past 2 years and is expected to continue rising in 1973/74. Higher prices for man-made fibers—influenced by rising petroleum prices—are increasing the demand for cotton. World cotton trade in 1973/74 should remain near last year's level, although U.S. exports are expected to reach the highest level since 1960/61.

World fertilizer supplies are expected to be tight for the next 2 years. Plant operating rates will likely approach rated capacity, and marketing and distribution will be critical for both developed and developing countries. In the long run, however, global resources of raw materials do not seem limiting. Substantial changes in technology, prices, and location of production and export centers may occur, however, as less developed regions develop their relatively unexploited resources.

World food production has grown rather steadily in the past two decades, with growth rates in the developed countries roughly paralleling those in the less developed countries as a group. However, the rapid population gains in the less developed regions have absorbed most of the food production increases, with the result that food production per capita in the less developed countries has improved only slightly. During the past two decades the developed countries have accounted for about 60 percent of the increase in world grain production, with all of their increase coming from higher yields.

Projections to 1985 suggest that countries in the

developed and centrally-planned parts of the world will continue to be the major producers and consumers of wheat and coarse grains. The developed exporting countries will continue to supply the less developed importing countries with a considerable amount of grain. The developing countries will import more wheat, while most of the increase in grain trade among developed countries could be in

coarse grains. The projections anticipate that the United States would supply by far the largest share of increased world import demand for coarse grains and an important share of increased import demand for wheat. American farmers have the potential to substantially increase their output of major agricultural products to levels consistent with the projections.

WORLD WEATHER PATTERNS

Better Weather in 1973

World weather during the 1973 crop year was in general more favorable than in 1972. The pattern of widespread dry conditions was modified, but severe drought persisted in sub-Saharan Africa.

Weather conditions in *Europe* (excluding the USSR) were generally favorable for agriculture in 1973 though somewhat less so than in 1972. Although moisture levels in the Mediterranean region increased, there was unseasonably cold winter weather (1972/73) and untimely winter and spring rains in early 1973. Rains arriving in mid-October relieved dry conditions in *Spain*; a deluge of rain and hail, ending a 10-month drought, caused severe flooding in the southeastern part of the country, with heavy losses of crops. Elsewhere in Continental Europe conditions were good, but an unusually dry summer limited crops in many areas. The lack of rainfall was particularly severe in parts of *Scandinavia* and northern *Germany*. Except for wet weather at the beginning of the 1972/73 crop year in *Romania* and *Yugoslavia*, *Eastern Europe* had good weather for crop development. Favorable weather conditions in the *United Kingdom* changed with the advent of very heavy rains in June and July; a return to more normal conditions occurred in the fall. Many countries are faced with unusually dry planting conditions in the fall for crops to be harvested in 1974.

Rainfall generally was heavier than normal in the *European USSR* during the summer of 1973, in contrast to the drought that gripped much of the area in 1972. Temperatures averaged slightly below normal during much of the summer, especially in July, in contrast to the heat wave that had prevailed during the summer of 1972. In the new lands agricultural region, rainfall during the summer also averaged above normal but in most key areas rainfall was less than in 1972. Temperatures in this region were moderately cooler than normal from about mid-June through mid-August, but not as cool as in 1972. The only significant area of below normal precipitation was centered on the Ural Mountains and was experienced in the period April-June.

In the *People's Republic of China* late spring and early summer rains in 1973 in many grain producing districts alleviated the drought that began in 1972. The heart of the drought zone was the marginal

rainfall area of northwest China, a minor agricultural producing region. Plentiful rain fell during April and May and continued at adequate levels during June and July with some dryness noted in several northern provinces. As is often the case in China, reports of marginal to adequate moisture in the north ran concurrently with reports of heavy rains and some flooding in south China. In general, weather conditions in China have been more favorable than in 1972.

Drought Still A Problem in Some Areas

Drought hit *Japan* in July and August, causing crop damage estimated at \$250 million. Worse hit were vegetables, followed by rice and fruits. Elsewhere in the Pacific, dry conditions affected the *Philippines* and *New Zealand*. The severe drought in *Australia* that had curtailed agricultural output during the 1972/73 crop year was broken. Early July rains, combined with mild weather, resulted in excellent seasonal conditions over most of the country; however, excessive rain in October and November has caused problems. Some modification of the severe dry conditions affecting *Indonesia* last year and persisting in 1973 has occurred; unfavorable weather caused problems in some areas during the main rice harvest. Monsoon rainfall arrived on schedule in *India*, with heavy rain during the first weeks of June; precipitation dwindled, but picked up in the first week of July and continued at favorable levels throughout the monsoon season. Although distribution of the moisture has been generally good, some dry areas remain. Heavy snows in Kashmir, followed by unusually heavy August rainfall in the upper tributaries of the Indus River, caused the worst floods in *Pakistan's* 26-year history.

Widespread dry conditions have affected countries in the eastern Mediterranean during 1973. *Cyprus* has had severe drought, with rainfall reported at less than one-third of normal, the least since records were started on the island in 1881. *Jordan's* production was cut by extreme dry conditions in early 1973. *Turkey* reported a lack of precipitation during June in major grain areas.

In Africa the drought affecting six sub-Saharan countries—*Mauritania*, *Senegal*, *Mali*, *Upper Volta*, *Niger* and *Chad*—has been widely publicized. Dry

conditions, which have persisted over 5 years, are reported to be the worst of the century. Rains came in June but were late and below normal. Extremely dry conditions persist in north central *Ethiopia* and in portions of *Sudan*. Dry weather, though not nearly so severe, has also reduced crops in North African countries. In *South Africa* weather conditions have been less than favorable, with spotty rainfall during the "summer" season (December 1972-March 1973) while "winter" rains, which usually begin in May, did not start until July. Winter rains (May-August) were below normal.

The *United States* enjoyed generally favorable

weather in 1973. Heavy spring flooding in the Midwestern *United States* delayed planting, but harvest weather has been good. Drought has continued for more than a year in the Pacific Northwest. Dry conditions persisted in the *Caribbean* region (except for occasional tropical storms) and in northern *South America* (*Colombia*, *Venezuela*, *Guyana*). Rains since September have improved the situation somewhat. Weather throughout much of *South America* has been favorable in 1973. Major exceptions are dry conditions in *Chile*, and excess rain in *Argentina* and *Uruguay*. (Richard C. McArdle)

WORLD PRODUCTION AND REGIONAL DEVELOPMENTS

World agricultural production in 1973 recovered from the weather-induced slump of 1972, increasing nearly 6 percent (table 1), according to preliminary estimates. Better weather conditions throughout most of the world were primarily responsible. Both developed and less developed agricultural economies shared in the increased production. But since population is growing more rapidly in the less developed countries (LDC's), their per capita output did not expand as fast.

World per capita agricultural production increased almost 4 percent, but the level achieved was only slightly higher than in 1971. While per capita output in the LDC's represented a substantial improvement over the very low level of 1972, it still fell short of the levels achieved in 1970 and 1971. Rising production in the *United States*, *Canada*, the *USSR*, *India*, *Latin America*, and *Oceania* was the main source of growth. *Africa* and *West Asia* were the only regions to experience substantial declines.

Developed Countries

Most developed countries increased their agricultural output in 1973. The index of agricultural production—relative to 1972—was up 5 points for *Canada*, up 8 points for *Australia*, down 3 points for *New Zealand*, down seriously by 27 points for *South Africa*, and essentially unchanged for both *Israel* and *Japan*. All of the *European Community* countries showed an increase in aggregate agricultural output, although production was little changed in *Denmark*, *United Kingdom*, and *Italy*. Four of the non-EC member countries showed increases (*Spain*, *Switzerland*, *Austria*, and *Norway*) while four showed declines (*Greece*, *Portugal*, *Sweden*, and *Finland*).

Canadian grain production totaled a near-record 37.6 million tons in 1973—about 2 million tons higher than last year's reduced crop. The increased production is due largely to an expansion in wheat output—17.1 million tons compared with 14.5 million

tons a year earlier. Coarse grain production is expected to total 20.5 million tons, about one-half million tons below last year, and substantially below the 1971 record of 24.4 million tons. Oilseed production may approximate 2.1 million tons, somewhat less than in 1972.

Grain stocks in *Canada* were worked down during 1972/73. Wheat stocks as of August 1, 1973, were approximately 10 million tons, 62 percent of year-earlier levels. Total coarse grain stocks were 5.8 million tons, nearly 900,000 tons below a year earlier.

Increases in livestock numbers, in combination with livestock producers' announced production intentions, point to increased consumption of grain, substantially higher imports of U.S. corn and increased consumption of protein meal in 1972/73. However, relatively high grain and oilseed prices could lead producers to curtail livestock expansion plans.

A reduced total supply (production plus stocks) of wheat is expected to result in a decline in *Canadian* wheat exports in 1973/74. However, exports may still exceed 14 million tons. Total exports of coarse grains may approximate 3.3 million tons (mostly barley)—roughly half a million tons less than in 1972/73. Partially offsetting these exports will be large imports of U.S. corn. *Canada's* oilseed (and oilseed meal) exports are expected to decline somewhat from the 1.1 million tons (meal equivalent) shipped in 1972/73. This is due to lower carryover stocks and an expected increase in domestic utilization, in combination with some decline in imports of U.S. soybeans and smaller rapeseed production.

Canada has announced both a temporary and a proposed permanent program for feed grains for domestic consumption. The temporary program will be in effect only in this marketing year. It gives *Prairie* farmers the additional choice of selling any quantity of feed grain to the *Federal Government* at pre-announced prices which tend to provide minimum-price guarantees for all domestic sales of

Table 1--Indices of agricultural production in the world and major regions and countries, 1964-73

(1961-65 = 100)												
	1964	1965	1966	1967	1968	1969	1970	1971	1972	Preliminary 1973		
World agricultural production <u>1/</u>	103	104	108	112	116	117	120	124	123	123	130	
Developed countries <u>2/</u>	104	104	110	113	117	116	118	123	123	123	129	
Less developed countries <u>3/</u>	103	104	105	110	114	119	123	126	124	124	131	
Per capita world agricultural production <u>1/</u>	101	100	102	104	106	104	105	107	104	104	108	
Developed countries <u>2/</u>	103	102	106	108	111	109	110	114	113	113	117	
Less developed countries <u>3/</u>	101	99	97	100	101	102	103	103	99	99	102	
Regional agricultural production												
United States	101	104	102	107	109	110	109	118	119	119	123	
Canada	102	112	126	108	117	123	112	129	120	120	125	
Latin America	101	109	108	113	113	117	121	125	124	124	131	
Western Europe	101	103	104	112	114	113	114	120	120	120	121	
European Community	102	103	104	112	114	113	113	120	119	119	121	
European Free Trade Assoc.	101	99	99	107	111	106	110	113	111	111	112	
Other Western Europe	99	105	109	115	120	118	125	134	133	133	132	
Eastern Europe	104	105	115	118	120	119	116	122	132	132	133	
USSR	109	103	122	120	129	123	136	135	129	129	149	
Japan	102	103	106	115	119	115	109	103	109	109	110	
South Asia	103	98	97	106	113	119	126	125	117	117	129	
West Asia	104	105	111	120	125	122	124	130	138	138	132	
Other East Asia	105	107	114	112	117	124	130	133	133	133	142	
Africa (excl. Rep. of S. Africa)	104	105	105	108	110	118	116	120	122	122	121	
Rep. of South Africa	104	96	104	131	113	118	121	133	138	138	111	
Oceania	107	101	114	107	124	121	119	123	116	116	121	

1/ Excludes Communist Asia.2/ North America, Europe, USSR, Japan, Republic of South Africa, Australia, and New Zealand.3/ Latin America, Asia (except Japan and Communist Asia), and Africa (except Republic of South Africa).4/ Recent Soviet information indicates that the increase may be nearer 10 percent rather than 15 percent.

Prairie feed grains. The proposed permanent program, expected to become effective in August 1974, would introduce far-reaching changes in the domestic marketing and pricing systems. In the long run, it could involve closer Canadian controls over imports of U.S. corn.

Export restrictions placed last summer on products such as oilseeds, oilseed cake and meal, beef, and pork have since been relaxed or lifted. Import duties on live cattle and beef were suspended in February 1973 to help stem the rapid increase in Canadian food prices, but were reimposed on September 22. On November 2, Canada imposed a surtax on imports of live cattle and fresh beef.

A sharp expansion of grain production in *Australia* is expected in 1973/74. Wheat delivery quotas were raised to over 14 million tons to allow virtually unlimited production. Although farmers did not plant as much wheat as the Government would have liked, wheat acreage is the fourth largest on record—over 9 million hectares. Wheat rust and locusts are expected to hold the crop to a maximum of 11 million tons, which would still be 60 percent above the low 1972/73 crop of 6.6 million tons.

Australian barley production in 1973/74 is expected to recover from last year's low level due to improved yields. However, area in barley will decrease due to diversion to wheat. Oats area is estimated to increase nearly 50 percent in 1973/74 and production may more than double last year's small crop. Due to the drought, 1972/73 plantings were reduced and a large area was used for grazing. Sorghum production is also expected to nearly regain former levels in 1973/74.

Exports of wheat and flour in 1973/74 may reach 6.5 to 7 million tons (in wheat equivalent), up from the 5.5 million tons in 1972/73 but well below the record 9.5 million tons exported in 1970/71. Major markets are likely to be the Soviet Union, the People's Republic of China, and Egypt, with Japan, the United Kingdom, Malaysia, Singapore, Taiwan and Chile also important destinations. Australia has long-term wheat agreements with the People's Republic of China and with Egypt.

New Zealand's agricultural situation should improve in 1973/74 as the long drought has been broken. The drought led to a shortage of winter feed grains, causing export controls on grains for 1973/74. Wheat (possibly up to 190,000 tons) and some feed grains will be imported this year from Australia and the United States. As in Australia, the New Zealand sheep industry is experiencing strong demand for its meat and wool.

Japan imports almost all its wheat, feed grains, and oilseeds. Domestic production of wheat ordinarily represents only 5 percent of consumption; of coarse grains, only 3 percent (mostly barley for beer); and of oilseeds, only 5 percent. Japan's 1973 rice output, however, of over 11 million tons is about

400,000 tons in excess of estimated 1974 domestic requirements.

Wheat stocks (under government control) are being increased from a 1.7-month supply to a 2.3-month supply. There are plans to increase compound feed stocks from a 1-month supply (now in private hands) to a 2-month supply through government assistance. Government controlled feed stocks (mostly barley) will be increased 50 percent. A soybean supply stabilization fund will be established by private organizations and it will maintain a 1-month supply of stocks for food uses (about 50,000 tons).

Consumption of wheat is expected to increase nearly 4 percent in 1973/74. Imports may be up only 3 percent, however, because 1972/73 imports built up stocks. Total coarse grain consumption may rise 14 percent. Part of this increase may be attributed to the discontinuance of government sales of surplus rice to the formula feed industry. If the increase were adjusted for the almost 1 million tons of rice used for feed in 1972/73, the growth in coarse grains consumption would be 6 percent. This part of the increase is explained by the expansion of the livestock sector in response to high prices and government incentives to increase livestock production. Oilseed meal consumption is expected to increase about 7 percent in calendar 1974, with matching increases in imports.

The Japanese Ministry of Agriculture and Forestry has decided to stimulate domestic production of soybeans, wheat, and feed crops to raise Japan's low level of self-sufficiency in these crops. New incentives, together with those already in effect, will not make soybean, wheat, and feed crop production as profitable as rice production but they may assure that fallow riceland does not come back into rice next year when the payments to divert riceland to fallow (\$110 per 0.1 hectare) are discontinued.

These attempts at increased self-sufficiency are limited to marginal requirements and will not significantly affect the growth of imports of U.S. grains and oilseeds. For wheat, the goal is to produce more soft wheat for a specialized oriental noodle popular in Japan. For soybeans, the goal is to produce more beans for food uses.

A new public corporation will be created to coordinate and expand Japan's efforts to develop agricultural resources in foreign countries to diversify supply sources for commodities including corn, soybeans, and beef.

General drought over much of southern South Africa in the past season could shift South Africa to an importer rather than an exporter of feed grains. Extremely dry weather in November and December 1972 over much of the "Maize Triangle" hampered normal corn plantings and only about 3.6 million hectares were planted compared with 5.5 million hectares last season. An accompanying heat wave destroyed much of the earlier planted corn and the

1973 production is now estimated at 4.2 million tons, down from 9.4 million tons in 1972. Production of white corn in the subsistence areas suffered most from the drought. After exporting 3.6 million tons of corn last year, South Africa's exports will be held to less than 200,000 tons during 1973/74. Imports of mostly white corn probably will be needed later in the year.

Grain production in the *European Community* (EC-9) (excluding rice) is estimated at about 105 million tons, 2 percent above the record crop of 1972. This harvest marks the area's third straight year of generally favorable weather and high grain yields.

EC-9 wheat production is expected to be about 41 million tons in 1973—the same as in 1972.

Coarse grain production is estimated at over 63 million tons, up more than 3 percent from 1972. While coarse grain production in the three new member countries declined by 3 percent, EC-6 production increased by 6 percent, largely due to France (up 9 percent) and Italy (up 5 percent). Barley and corn production rose 3 percent and 16 percent, respectively, while oats and rye declined.

EC production of oilseeds, primarily rapeseed, is expected to decrease by about 10 percent in 1973. Fishmeal output may be slightly above last year's level. However, EC production of these commodities normally provide less than 8 percent of EC consumption of protein meal (on a soybean meal equivalent basis).

It is uncertain how much high feed prices and scarce supplies will limit the EC livestock industry and change feeding practices or the composition of feed rations. Although high feed prices have apparently not yet had a severe impact on the EC livestock industry, they may have delayed the high production phase of the hog cycle and restrained poultry meat and egg production. EC-9 consumption of grains is expected to be up less than 1 percent in 1973/74; net imports, at about 12 million tons, will be down slightly. Consumption of oilseed meals, on the other hand, is expected to be up 5 percent in 1974, with imports up accordingly.

The grain situation in the Community has been complicated by the EC's imposition of export controls. The ban on the issuance of export certificates for soft wheat, briefly imposed in early August, was replaced as of August 15 by a system of export levies. At the same time, export levies were imposed on corn and barley. Export levies as of November 16, 1973 were 30 units of account per ton for soft wheat. Export levies are no longer in effect on corn and barley. An export embargo remains in effect for durum wheat while export levies on rice were imposed on October 19, replacing an export embargo in effect since May.

On November 5, 1973, the EC commission made recommendations to the EC Council for the modification of the Community's Common

Agricultural Policy over the period 1973-78. For the dairy sector, the Commission recommended the imposition of a charge—not to exceed 2 percent of the milk target price—on milk deliveries to dairies in times of surplus. Each farm, however, would have a free delivery allowance of 10,000 liters of milk. A charge on dairies which sell more than a certain percentage of their produce to support agencies was also proposed. These funds would be used to aid the disposal of surplus dairy products. The Commission further proposed a 13 percent decrease in the butter support price to \$1.85 per kilogram combined with a 16 percent increase in the price of nonfat dry milk powder.

The Commission also recommended an increase in feed grain prices relative to soft wheat and certain changes in the support system for grains. To achieve the change in the ratio of feed grain to wheat prices, the price of soft wheat would be temporarily "frozen" while corn and barley prices would rise. The support system would be made less attractive for farmers by the withdrawal of support from low quality grain and the replacement of regional support prices by a single, EC-wide support price. In line with these changes, the gradual abolition of the "denaturing" premium for the use of wheat for feed was recommended. This subsidy was substantially reduced earlier this year. As a result, feeding of wheat in the Community is expected to be reduced somewhat.

To lessen dependence on imports of protein feeds, the Commission proposed a number of measures including a guaranteed price for soybean producers. The support system proposed for soybeans would not involve any change in the import system for soybeans or soybean meal, which currently enter duty-free. Instead, a payment would be made to the producer covering the difference between the guaranteed price and the EC market price.

The United Kingdom, Ireland, and Denmark in January 1973 began their transition to higher EC farm support prices and higher levels of import protection for most agricultural commodities. The impact of these changes has been largely obscured by the high world market prices of major farm products. The transition has been further complicated by the unstable relationships between the currencies of the EC member States.

Total grain production for *non-EC Western Europe* is estimated at 28.8 million tons in 1973, nearly 1 million tons below last year and 3 million tons below the record harvest of 1971. Wheat production may decline 8 percent to about 9.1 million tons; coarse grain production should drop slightly to 19.3 million tons. Spain's continued effort to avoid surplus wheat production accounts for most of the decline in wheat output. Net imports of grain are expected to rise 2 million tons to just over 7 million tons.

Oilseed production in non-EC Western Europe is

largely confined to rapeseed (Sweden and Switzerland), sunflower (Spain) and cottonseed (Greece and Spain). Soybeans are produced commercially only in Spain where production is expected to reach 10,000 tons in 1973, double the 1972 output. Continued growth of the livestock and mixed feed industries in Other Western Europe and the opening of new crushing facilities in many countries are expected to generate an increasingly strong import demand for oilseeds.

Livestock and poultry production is expanding in non-EC Western Europe. This is particularly true for the combined Mediterranean area (Greece, Portugal, and Spain) where cattle, hog, and poultry numbers increased significantly between 1972 and 1973. The governments of these countries are offering substantial incentives to expand livestock production. (Reed E. Friend and Donald M. Phillips, Jr.)

USSR

Soviet agricultural production in 1973 increased sharply, but reportedly was short of the 12.6-percent planned growth. This stellar performance was made possible by unusually favorable weather in 1973 in contrast to the extremely unfavorable experience of 1972. Most of the 1973 increase was attributable to record or near-record harvests of the major crops. Total crop production in 1973 is estimated to be approximately a fifth larger than in 1972. A small increase in livestock production is also expected, partly the result of large grain and soybean imports.

Gross 1973 grain production reportedly was more than 215 million tons, 15 percent higher than the previous record. Also, it was almost 20 million tons above the 1973 grain production goal and almost 50 million tons larger than the relatively poor 1972 crop. However, because of heavy precipitation during harvesting over large areas in both European and Asiatic USSR, the quality of much of the 1973 grain crop is probably below average and the amount of excess moisture and foreign matter contained in the gross harvest figure may be somewhat greater than normal.

A larger area and use of more fertilizer, in addition to the generally favorable weather, contributed to the bumper grain crop. Total harvested grain area is estimated at 126 million hectares, 5 percent more than the 1968-72 average and the largest grain area since 1965. Chemical fertilizer use on grain in 1973 was planned at 26 million tons, roughly a fourth more than used the year before.

Soviet 1973 gross wheat production is estimated at 105 million tons, almost a fourth larger than the 1972 harvest but only about 5-6 percent above earlier bumper wheat crops (Soviet officials have not yet reported the breakdown of 1973 production by type of grain). Wheat this year occupied around 63 million

hectares, compared with 58.5 million in 1972. Winter wheat area in 1973 was relatively small since only 80 percent of the planned winter grain area was seeded because of dry conditions in the fall of 1972. Springwheat area was expanded to help offset the effect of the reduced winter area on the harvest. Nevertheless, winter wheat accounts for an estimated 40 percent of the harvest and spring wheat for the remaining 60 percent.

The 1973 feed grain (barley, oats, and corn) crop, estimated at 83 million tons, will be by far the largest ever—harvests in 1970-72 averaged 60 million tons. Included in the 1973 feed grain total are an estimated 50 million tons of barley and 20 million tons of oats.

The record 1973 harvest will significantly relieve the Soviet grain situation. If the planned 1974-million-ton goal is assumed to represent USSR grain requirements in 1973/74, then Soviet officials are free to decide on the disposition of almost 20 million tons of grain from the 1973 crop. This grain could be used (1) to rebuild stocks; (2) to increase feed use of grain above that originally planned; or (3) to expand exports. Although feed use and exports probably will benefit from this improvement in Soviet grain supplies, the rebuilding of grain stocks is expected to be given high priority. The huge 1972/73 Soviet grain purchases suggest that carryover stocks at the beginning of the 1972 harvest were minimal.

Soviet grain trade in 1973/74 is expected to differ significantly from 1972/73. Grain imports are estimated at 11 million tons, about half the import volume in 1972/73. On the other hand, grain exports for 1973/74 are estimated at 6 million tons, roughly double such exports a year earlier. Feed grains accounted for about a fourth of Soviet grain imports in 1972/73 and for about half in 1973/74. In both years, wheat has dominated Soviet grain exports.

Soviet oilseed production will apparently set a new record in 1973. The sunflowerseed harvest is estimated at 6.5 million tons, well above the very poor 5 million ton crop in 1972. The Soviet 1973 cotton crop, estimated at 7.6 million tons, will provide about 5 million tons of cottonseed, compared with 4.8 million tons of seed from the 1972 cotton crop. Soybean output in 1973 is estimated at a near-normal 500,000 tons, about double the poor 1972 crop. Linseed production also probably recovered in 1973.

Improved domestic oilseed supplies will greatly reduce Soviet oilseed import requirements in 1973/74. Soybean imports may be limited to the amount that remained to be shipped on July 1, 1973, of the million tons purchased in 1972. However, continued emphasis on livestock raising in the USSR could well result in some additional soybean purchases if prices decline to more normal levels.

Sugar beets and potatoes also benefited from the good precipitation during the 1973 growing season. Sugar beet production in 1973 is estimated at 90 million tons, a harvest second only to the 94.3 million

tons produced in 1968. Government sugar-beet procurements in 1973 are reported at more than 82 million tons, roughly a fourth more than procured in the past 2 years. Thus, beet sugar production in 1973/74 should also be up roughly a fourth. A potato crop equal to the 1966-70 average of 95 million tons is estimated for 1973. The record Soviet potato crop was 102.2 million tons in 1968.

Soviet livestock product output in 1973 is expected to be marginally higher than in 1972, despite the adverse effect in early 1973 of low feed supplies from 1972 crops. This relatively good performance was made possible by a late, mild winter and an early spring which reduced feed requirements. Also, domestically produced grain and oilseed supplies were supplemented by large-scale imports. Increased efficiency in feed utilization was probably realized through the establishment of feed use control units on collective and state farms. Most livestock product output goals for 1973 were reduced last winter to discourage distress slaughtering in trying to fulfill output goals which were unrealistic under prevailing conditions. Finally, the early spring and abundant precipitation during the 1973 growing season resulted in good pasture and forage crop development.

Meat production in 1973 is estimated at 13.5 million tons, almost equal to the 13.6 million tons produced in 1972 and well above the reduced 1973 goal of 12.9 million tons. In comparison with 1972, beef and veal output in 1973 is expected to be about the same, pork output down somewhat, while mutton and lamb and poultry meat are expected to be up slightly.

Soviet 1973 milk output is estimated at 86 million tons, 3 percent above 1972 and about equal to the reduced 1973 goal. Egg and wool production in 1973 are both expected to be about 7 percent higher than in 1972 and both well above the revised 1973 goals.

Changes in herds on collective and state farms and good feed supplies from the 1973 growing season suggest that total livestock numbers in the USSR on January 1, 1974, will be significantly larger than a year earlier. Collective and state farms on July 1, 1973 had 1.7 million (2 percent) more cattle, 200,000 (0.4 percent) more hogs, and 4.5 million (3 percent) more sheep and goats than on July 1, 1972. Also, July 1 poultry numbers on these farms had increased by 19 million (4 percent). No information is available on changes during 1973 in numbers of privately owned livestock, but the relative importance of private holdings has been declining in recent years. (Fletcher Pope, Jr.)

Eastern Europe

Both wheat and total grain production in Eastern Europe exceed the records achieved in 1971/72 (31 million and 89 million tons, respectively) and the quality of the crop is improved. In 1971/72, there was

less usable grain than the statistics indicate because of high moisture content and spoilage. In Yugoslavia, official estimates placed such losses at 10 percent (800,000 tons of corn). Romainia also experienced a wet fall in 1972, and probably had a similar 10-percent loss.

Larger livestock inventories in the region are strengthening the demand for grain. Cattle numbers have increased; the 2-million-head increase in Polish midyear hog numbers probably offset the losses due to foot-and-mouth disease in Hungary, Bulgaria and Czechoslovakia. In addition, shortfalls in forage and potato crop will keep 1973/74 grain import requirements just under the 6.6-million-ton level of 1972/73. An expanding mixed feed industry and growing numbers of large hog-fattening and broiler enterprises are generating continuing demand for protein meal. Imports are about 3 million tons in this protein-feed deficit region, despite high world prices. These factors, together with shortfalls in Indian peanut meal and Peruvian fishmeal in early 1973, resulted in large purchases of soybean meal from the United States and West Germany. Between January and September 1973, Eastern Europe purchased 840,000 tons of soybean meal directly from the United States and 600,000 tons from West Germany—amounts totaling more than the 1.25 million tons from these two sources in all of 1972.

The region is going into 1974 with larger oilseed supplies from domestic output, however. In the northern countries, nearly 600,000 tons of protein meal will originate from the 1-million-ton rapeseed crop (a 38 percent increase over the short 1972 crop). The southern countries will be going into 1974 with 1.9 million tons of sunflowerseed, 300,000 tons of soybeans, and 160,000 tons of other oilseeds—equivalent to more than a million tons of protein meal. Domestically produced oilseeds supply about one-third of Eastern Europe's current protein needs.

Faced with the high price of imported oilmeal, several Eastern European countries are also looking for alternate domestic sources of protein supplements.

Czechoslovakia is seeking foreign technology to improve the recovery of tankage, blood meal, and bone meal in slaughterhouses. This modernization program—estimated to cost about \$20 million—is scheduled for completion during 1975-77.

As a more immediate measure, the Czechoslovak government is offering bonuses to encourage the expansion of fall-sown rapeseed and has granted 50 percent premiums on above-average quantities of rapeseed delivered to state procurement agencies next spring.

Hungary has established a government committee responsible for promoting domestic protein supplements. The cost of this program is an estimated \$55 million. The committee has

recommended that the alfalfa meal industry be modernized; that the export of alfalfa meal and feed peas be restricted; and that the soybean area, insignificant in 1973, be expanded to 12-13,000 hectares in 1974, and to 100,000 hectares within 10 years.

In Romania, the largest sunflower and soybean producer in Eastern Europe, soybeans were planted on 185,000 hectares last spring. This was an increase of 30 percent over the area planted in 1971 and 1972. The sunflower area also increased in 1973. Romania, in cooperation with a Japanese enterprise, is planning to construct a plant to product protein feed. (H. Christine Collins and Thomas Vankai)

People's Republic of China

Agricultural production for 1973 is estimated to be better than last year's weather-affected output. Grain production this year is expected to be in the same range as 1971's 220-230 million tons, 10 million tons more than in 1972.¹ Favorable weather conditions, increased inputs and better organization also probably will improve the output of oilseed, cotton and tobacco crops compared with 1972 production. The production of most oilseed crops and cotton, however, is still judged to be below record levels. Livestock numbers are believed to have increased modestly again this year.

Estimated grain production this year consists of approximately 27 million tons of wheat, 103 million tons of paddy rice, 71 million tons of miscellaneous grains, and 26 million tons of tubers (grain equivalent). Early harvested grains, which account for one-third of the total grain harvest in the People's Republic of China (PRC), include early rice, winter and spring wheat, barley, and pulses. A PRC news release in August reported that a bumper crop of early grains had been harvested. Late grains, which account for two-thirds of China's total grain, include intermediate and late rice, miscellaneous grains and tubers. Most of these crops were harvested by the end of November. No national reports have been received, but provincial and district reports indicate bumper harvests. A number of important wheat provinces reported this autumn that the area sown to wheat had been increased. Good soil moisture conditions resulted from above normal autumn precipitation in the principal growing areas. The current outlook for the crop to be harvested next spring is good.

Oilseed production (soybeans, peanuts, cottonseed, and rapeseed) is calculated to have hit a peak in 1970

of 13.8 million tons, declined in 1971 to 13.3 million tons, and in 1972 decreased further to 12.5 million tons because of drought in North and Central China and heavy rains in Northeast China. Acreages of soybeans, peanuts, and cotton are thought to have declined this year, but an increase was registered for rapeseed. The rapeseed crop has been harvested and reports indicate production was greater than last year's estimated 1 million tons. In addition to the good rapeseed harvest, production of the other crops should bring total oilseed output close to the 1971 level.

Cotton fields in most areas were harvested by the middle of November, but a national report has not yet been released. Area sown to cotton is believed to have declined slightly. Yields this year are thought to be better than last year because of more favorable weather conditions and production for 1973 is estimated at 7 million bales.

Livestock production is judged to have registered only modest gains in 1973. Drought last year reduced fodder for sheep, cattle, and goats in the pastureland areas in the Northwest and for hogs, draft animals, and poultry in the cultivated areas of China. The number of hogs is thought to have increased again this year and the total now may exceed 200 million.

In spite of apparently good domestic production this year, China's demand for grain, oilseeds and cotton is strong because: (a) production of these crops was reduced last year, creating the need to build stocks; (b) population increases by 15-20 million annually; and (c) livestock numbers, especially hogs, have increased.

China imported about 6.3 million tons of grain in 1972/73, including about 5.4 million tons of wheat and 0.8 million tons of corn. In 1973/74 China is expected to import about 9 million tons of grain, including 6.5 million tons of wheat (4.0 million from the United States, 1.5 million from Canada, and 1.0 million tons from Australia) and 2.5 million tons of corn from the United States.

China recently signed long term wheat agreements with Canada and Australia for calendar years 1974, 1975, and 1976. For these years Australia has agreed to ship a total of 4.7 million tons and Canada has contracted to send between 4.9 and 6.1 million tons. U.S. grain companies have commitments to deliver wheat to China extending only through June 1974.

China exported about 700,000 tons of rice in 1971 and 800,000 tons in 1972. China's rice exports this year are expected to exceed 0.9 million tons.

The PRC apparently moved from being a net exporter of vegetable oil (and seeds) in 1971/72 to a net importer in 1972/73. This trend seems to be continuing in 1973/74. In 1972/73 the United States sold to the PRC 33,000 tons of soybeans and 61,000 tons of soybean oil valued together at \$27 million. In 1973/74 anticipated U.S. soybean exports to China amount to 905,000 tons.

¹Chinese government officials claim a record harvest this year of 250 million tons of grain. Both official and Economic Research Service estimates define grain as wheat, paddy rice, miscellaneous grain and tubers (converted to a grain equivalent basis at a ratio of 4 units of tubers to one of grain). Miscellaneous grains include barley, buckwheat, corn, millet, oats, pulses, rye and sorghum. An extraction rate of 68 percent is used to reduce paddy rice to a milled basis.

In the 1972/73 marketing year, cotton producing countries exported an estimated total of 1.6 million bales of cotton to China, of which 587,000 were from the United States. In the current marketing year China is expected to purchase about 1.2 million bales, of which 800,000 will likely come from the United States.

In 1972/73 the United States exported more than \$200 million worth of agricultural products to the PRC while U.S. agricultural and nonagricultural imports from the PRC totaled \$45.5 million. U.S. agricultural exports to the PRC this fiscal year could be 4 to 5 times greater than last year. China already has purchased Australian and Canadian wheat and U.S. cotton for 1974/75 delivery. Chinese trading corporations are expected to be in the market for additional wheat and cotton, and for quantities of oil/oilseeds and corn. (Frederick W. Crook)

Asia

Agricultural production in developing Asia² advanced by about 9 percent in 1973, and was almost 5 percent above the 1971 output, as weather was generally favorable for most of the region. Substantially larger rice crops in Thailand and Bangladesh enabled agricultural production to increase by 18 percent in each country. The 1973 output was a record for both countries, with Thailand continuing its strong upward trend after a sharp setback in 1972 and Bangladesh showing its first substantial upturn since 1969.³ India, which produces about half of the total agricultural output in developing Asia, increased its 1973 output by 12 percent and surpassed the 1971 total by 2 percent. Other strong advances in agricultural output occurred in West Malaysia (11 percent), and the Philippines (8 percent). Smaller gains were recorded in Taiwan, Burma, South Vietnam, South Korea, and Indonesia. Only Pakistan and Sri Lanka produced a smaller output (-4 percent, each) in 1973 than in the previous year. Drought gripped Sri Lanka for the second straight year, while heavy flooding prevented higher output in Pakistan.

Asian countries entered the 1973/74 crop year with lower stocks of nearly all grains than they held the previous year. Per capita rice stocks were reduced to the lowest level in the last 30 years. Grain prices soared to record or near record levels in most countries, with rice prices paving the way. Retail prices were substantially above ceiling levels in many Asian countries. In some countries, consumers were encouraged to eat less rice and more of other

grains. A barley-rice mixture was continued in South Korea, along with riceless days, while corn and rice were mixed in the Philippines.

Although grain production has increased somewhat in 1973, prospects for adequate grain supplies do not appear favorable for at least another year. Pent-up consumer demand and desire to rebuild stocks will absorb this year's production increase. Rice prices have declined during the recent (October-November) harvest but have not reached the mid-1972 levels.

Favorable monsoon rainfall from June to September enabled India to register an 11-million-ton increase in food grain production during 1973. The increased output will bring some relief to deficit areas but will not eliminate food shortages in cities. Much of the food grain increase in 1973 is attributed to the record rice crop of 43.3 million tons, which climbed 6.6 million tons over the drought-affected 1972 crop. Sorghum and millet (Bajra) production advanced 2.3 million tons and 1.8 million tons, respectively, while wheat production fell about 1 million tons. Despite the increased food grain production, India's grain imports are expected to reach 6 million tons in 1973/74, with 4.5 million tons under contract prior to November 1. The large imports during mid-1973 were primarily needed because of the shortfall of the 1972 crop and sharp reduction of stocks.

Although India faced greatly increased expenditures for food imports because of rising prices, those expenditures were largely offset by higher export earnings which benefited from a general rise in prices for Indian agricultural exports. For example, India's export earnings from peanut meal, safflower meal, and castor oil in 1973 will be more than double the 1972 level—with only a slight increase in quantity shipped.

Heavy flooding in Pakistan in August was believed to be the country's worst ever. About 3.5 million people were dislocated by the floods which caused extensive damage to 1 million hectares of cropland and destroyed over 170,000 homes and much stored wheat in Sind and Punjab Provinces. Cattle losses totaled over 50,000, and more than 3,000 tubewells were rendered unusable.

The floods also damaged the rice crop and lowered production by an estimated 600,000 tons. Rice production in 1973 plummeted 15 percent to slightly over 1.9 million tons—the lowest since 1967. In addition, about 1 million tons of wheat stored in village houses were damaged or destroyed by the flood. Cotton, which was ready for harvest, was also damaged, with losses reaching nearly 1 million bales. Further, the shortfall in Pakistan's cotton crop reduced domestic supplies of oil and meal by about 25 percent. Sugarcane, vegetables, and corn were also adversely affected by the floods.

Favorable weather in Bangladesh resulted in a 19-percent rise in rice production to 12.4 million tons in

²Includes Bangladesh, Burma, India, Indonesia, Khmer Republic, South Korea, West Malaysia, Pakistan, the Philippines, Sri Lanka, Taiwan, Thailand and South Vietnam.

³Bangladesh was East Pakistan prior to 1971.

1973. Despite the sharp increase, per capita food grain production remains below the high level achieved in 1969. Food grain imports for 1973 are again estimated at nearly 2.5 million tons, but are expected to be somewhat less in 1974 because of the good crop. Assuming that grain imports under foreign aid will continue at a relatively high level, Bangladesh should have adequate foreign exchange earnings from exports of jute products to purchase additional needed food grains.

Thailand's rice and corn crops recovered in 1973, and export prospects for both commodities are brighter than they were a year ago. In 1972, output of both crops was so low that export availabilities were drastically reduced in 1973. Rice exports, which reached a record 2.1 million tons in 1972 and resulted in substantial stock reduction, are expected to total only 900,000 tons in 1973. Thai rice export prices soared to nearly \$600 per ton in August—a 250 percent rise from a year earlier. Domestic supplies were so low in August that Government officials seized 135,000 tons of rice from merchants in the Bangkok area. A temporary rice export ban was also enforced to allow more rice to enter the domestic market. Thailand's corn situation parallels that of rice, but it is not as critical to the economy. After reaching a record 2.2 million tons in 1971, corn production dropped 40 percent to 1.3 million tons in 1972. Consequently, corn exports declined from 1.8 million tons in 1972 to an estimated 1.4 million tons in 1973. A record corn crop of 2.5 million tons in 1973 will allow Thai corn exports to expand sharply in 1974.

Indonesia emerged as the world's leading rice importer in 1972, and will probably retain that position at least through 1974. Indonesia's rice imports totaled 992,000 tons for the first 6 months of 1973 and may reach 1.3 million tons for all of 1973. The main season crop of rice harvested from April to June did not reach expectations because of delayed planting, but the second crop is reported to be outstanding. A record 13.2 million tons is currently estimated for both crops. Although Government plans for procuring large amounts of rice domestically during the main season did not materialize, the high import level will permit sufficient stock injections into the market during nonharvest periods. In addition to large rice imports, wheat imports rose sharply in 1973, and Indonesia became a corn importer for the first time. The United States supplied Indonesia with all of its 171,600-ton corn requirement and will supply an estimated 175,000 tons of rice and 500,000 tons of wheat and wheat flour during the year.

The current Philippine rice crop is expected to reach 3.7 million tons, slightly more than the previous high 1970 crop, but nearly 30 percent more than the flood and drought-stricken crop of a year ago. Before the harvest began in October, very little rice was available in the open market. From mid-August until

October, corn and rice were being mixed to encourage more corn consumption and to make the available rice last until the new harvest began. Philippine rice imports for 1973 will total about 350,000 tons, substantially less than the 600,000 tons authorized by the Government. (E. Wayne Denney)

Latin America

The significant improvement in the Latin American 1973 agricultural situation is associated with recovery from the effects of adverse weather during 1972, particularly in Mexico, Central America, Argentina, and Brazil. Drought continued into early 1973 and limited late-year harvests of important crops in some other areas including the southern Caribbean and the Andes region of South America. Improved agricultural conditions are anticipated in most areas through mid-1974.

According to preliminary estimates, the region's agricultural output will rise more than 5 percent during 1973, recovering to the normal trend line approximating the population growth rate. A 6-percent gain in crop production reflects a strong recovery in corn and sorghum grains and record harvests of rice, oilseeds, sugarcane, bananas, and cotton. Those gains were offset to some degree, by a reduction in the region's 1973 harvests of wheat and coffee. Production of beef and milk reached all-time highs, contributing to a strong recovery in the region's per capita food output to a level slightly below records established in 1970 and 1971.

Production and favorable world prices maintained the Latin American agricultural exports at unusually high values during 1973. The favorable trends in trade are expected to support the average 6-percent economic growth rate of Latin America during recent years. Strong world demand is expected to stimulate further advances in production of sugar, bananas, cotton, feed grains, and livestock products in the principal exporting countries, thus contributing to a rising level of export earnings during 1974.

Rising demand, associated with high rates of urban population and income growth, may also maintain 1974 agricultural imports near the 1973 record levels. Limitations upon food supplies have been indicated by sharply advancing prices in most countries during 1973, particularly for livestock and related grain and feed products. These developments are encouraging efforts to maintain more adequate supplies by increasing production and imports and regulating the export of important food commodities.

Mexico's drought was broken by heavy rains near midyear 1973, which provided improved moisture for pastures and late-harvested crops and increased available supplies of irrigation water. Agricultural output for 1973 rose about 6 percent to a record high as recovery in corn was supplemented by record harvests of sugarcane, soybeans, fruits, vegetables,

and many basic food crops. Those gains were partly offset by reduced plantings of cotton and safflowerseed and some dropoff in pork production.

Mexico imported record quantities of grains and fats and oils to meet growing domestic requirements in 1973. Faced with rising prices for food, particularly livestock products, the Government significantly increased guaranteed prices to producers for grains and oilseeds and imposed restrictions upon cattle exports to increase domestic slaughter.

Argentina's agricultural output recovered, rising nearly 7 percent in 1973, as improved moisture conditions resulted in near-record harvests of feed grains, oilseeds, and other early crops. However, wheat plantings were reduced sharply due to low guaranteed prices and wet weather, and the estimated 5.4 million tons for the harvest now underway is below the average for recent years. A slight fall-off in beef production was attributed to improved pastures and the anticipation of higher prices which encouraged herd buildups.

Export supplies of Argentine wheat will reflect a reduced carryover and the small 1973 harvest. In contrast, a large carryover and record 1974 harvests are expected to maintain record quantities of corn and sorghum grains for export. Record cattle numbers indicate resumption of a rising trend in meat production and exports during the coming year.

Brazil's agricultural production resumed a strong uptrend, rising more than 7 percent to an all-time high in 1973. The rise was paced by sharp gains maintained for soybeans, sugarcane, and livestock products in response to strong foreign and domestic demand and to incentives provided by favorable Government policies. Wheat production recovered sharply from unusually wet weather of a year earlier and the rice and corn harvests were estimated at all-time highs.

In contrast, 1973 coffee production in Brazil was cut sharply by frost damage, and cotton plantings were reduced in response to lower 1972 prices. High prices and an unusual diversion to soybeans encouraged the Government to increase producer prices and provide special credits for wheat and corn. It also banned corn exports in February 1973 and instituted a requirement for 1 ton of soybeans to be sold in the domestic market for every 3 tons exported in order to supply domestic requirements for feeding. Similar regulations were maintained for meat exports, and Government policies also increased emphasis upon imports in order to restrict price rises of vegetable oils and other food products.

Improved growing conditions contributed to a sharp recovery in *Central American* production of basic food crops, bananas, and coffee. Beef production also increased, and a sharp expansion in cotton plantings contributed to a 10-percent rise in 1973 agricultural output for the area. The *Dominican Republic's* agricultural output continued a sharp rise

based upon strong expansion in sugar and moderate gains in other food commodities. This rise contrasted with lower 1973 food production in Jamaica, Trinidad, and other Caribbean areas affected by drought and declining trends in sugar production.

Adverse weather maintained 1973 production, particularly of grain and food crops, near reduced 1972 levels in Chile, Colombia, Ecuador, and Venezuela. Despite some anticipated improvement in growing conditions, these countries are expected to maintain unusually large imports of grains, fats, and oils, and other food products through 1974. In contrast, Peru's agricultural output exceeded previous records due to continuing advances in sugarcane and a moderate recovery in food crop production. (Howard L. Hall)

Africa and the Middle East

The 1973 agricultural year was not good in Africa and the Middle East. Dry weather was responsible for reducing output in much of the area.

Africa's Drought

The droughts in northern, eastern, and southern Africa have been over-shadowed by the extreme drought in the Sahelian countries of west Africa. The scene-stealing west African drought was a continuation of a 5-year period of subnormal rainfall. With no relief in 1973, the cumulative effects of the prior dry years peaked to threaten famine and to cause the death of millions of livestock. To avert famine, gifts of grains and other foods were sent to the countries most affected—Chad, Mali, Mauritania, Niger, Senegal, and Upper Volta. The gifts also included medicines and the airlift of supplies to the hinterland.

The U.S. Government, other national governments, international organizations, and private charities responded generously to this call. Some 625,000 tons of grain were received by the six drought-stricken countries. The United States supplied 256,000 tons—about 40 percent of the total. About one-third of the U.S. contribution has been distributed through the World Food Program of the United Nations' Food and Agriculture Organization (FAO). Another third was distributed through a regional grain stabilization program that was operating before the present drought emergency became so intense. The remainder of the U.S. shipments were made under emergency bilateral agreements with the countries involved. The U.S. contributions of grain, other food, airlifts, and medicines amounted to some \$47 million.

The decimation of the principally nomadic livestock herds in the Sahelian countries due to lack of water or forage will have a long-term effect, for it will be years before the livestock sectors of these

countries can regain their accustomed prominence. Recent estimates of livestock death losses are 50 to 60 percent of the herd in Mali, Mauritania, and Upper Volta, and 30 to 50 percent in Chad, Niger, and Senegal. However, relief efforts which were mounted in 1972 and continued throughout 1973 to provide medicines, vaccines, and supplementary feed have assured the survival of the remaining herds, especially breeding stock and calves.

Because of less than normal rainfall in 1973 and continued poor harvests, emergency needs for relief supplies of grain and other foods will continue into 1974. FAO has estimated that requirements will be around 550,000 tons of cereals through November 1974.

Recent news about the Ethiopian drought indicates that about 1.6 million people have been affected, with reports of many deaths. Similar to the Sahelian situation, the livestock population in the affected provinces of Wollo and Tigre has been decimated. The United States has contributed 18,000 tons of grain and in the future will probably pledge more. At this date, Ethiopian sources indicate that the famine is "under control"; however, continued relief will be needed throughout 1974.

In addition to the areas discussed above, drought severe enough to warrant substantial relief efforts in 1973 occurred in the Gambia, Northern Nigeria, and Sudan.

Africa's Production

Agricultural production in Africa was down about 3 percent in 1973. Food production fell a similar amount, dropping per capita food production by 7 percent to a level only 93 percent of the 1961-65 average. The large drop in *South Africa's* production was the largest contributor to the continent's lower production. Dry weather reduced that country's corn crop, which normally accounts for half of the nation's total agricultural production, to only 45 percent of the fine 9.4-million-ton crop harvested in 1972. Grain sorghum production was down by half also, but wheat production increased slightly. South Africa's total production dropped about 20 percent from 1972 to an index of 111 (1961-65=100).

Nigeria, the largest agricultural country in Africa, maintained its 1973 production at about the level of 1972 in spite of the drought in the north.

Egypt, however, experienced a modest increase in total agricultural output, as did several other smaller African countries. In *Egypt*, the largest grain

importer in Africa and the Middle East, authorities have indicated that some 2.6 million tons of wheat, 600,000 tons of wheat flour, and 250,000 tons of corn will be imported between July 1, 1973, and June 30, 1974. These amounts have not been materially affected by the Arab-Israeli war of 1973.

North Africa's grain production was down in 1973, as Morocco, Algeria, and Tunisia harvested roughly a third less wheat and barley. This translates into heavier import demand for this consumption year. Morocco's indicated need is for around 1 million tons of wheat before the 1974 harvest (May-June). This is about double the amount imported a year earlier. Algeria's import requirements could reach 1.5 million tons of wheat.

Middle East Production

Agricultural production was also lower in the Middle East (excludes Egypt). The 1973 output was down about 5 percent to a level 32 percent above the 1961-65 average. Production of food commodities was down a similar amount, dropping the per capita food production index to 98 (1961-65=100)—the lowest since 1965.

The biggest loss in production was in Turkey, the chief agricultural country of the region, where the major crop—wheat—was down 15 percent to 8 million tons. This loss followed 2 years of bumper wheat crops, 10.7 million tons in 1971 and 9.5 million tons in 1972. The lower crop in 1973 necessitates some imports to maintain normal consumption in the country.

The most dramatic losses of production in the area occurred in Cyprus and Jordan where dry weather prevailed. Jordan's grain crops for 1973 are the lowest of modern times. Jordan is normally an importer of grains, but the country will need to at least double its average grain imports to feed its people until the 1974 harvest. The index of both estimated 1973 agricultural production and of food production for Jordan dropped to 62 (1961-65=100). This drop resulted in a per capita food production index of 45.

Cyprus suffered a severe dry spell which drastically reduced the grain crops. Its total agricultural production index dropped significantly although fruit, vegetable, and in particular olive production held up rather well.

Production of wheat, the dominant crop in the Middle East, was down by 3.3 million tons to 14.2 million tons in 1973. This indicates a substantially increased import need. (Robert E. Marx)

HIGHLIGHTS ON AGRICULTURAL PRICES

Higher Agricultural Prices

During 1973, prices rose sharply for all major agricultural commodities in international trade. Among major U.S. agricultural products, soybean meal led in the price rise, nearly doubling in average export unit value between January-October 1972 and January-October 1973. At the same time, U.S. export unit values of wheat and flour, corn, grain sorghum, soybeans, milled rice, inedible tallow and cattle hides increased by approximately 50 percent. During January-October 1973, the price index of principal U.S. agricultural exports rose 47 percent over a year ago. Meanwhile, the price index of principal U.S. agricultural imports rose 26 percent. Average unit import values of coffee, fresh and frozen beef, and ham were all about 30 percent higher; rubber, dutiable cattle (i.e., cattle other than for breeding), and cocoa beans were 50 percent higher; and clothing wool values were nearly 90 percent higher.

What led to these 1973 price levels? Shortfalls in 1972/73 agricultural output in key countries, primarily. Secondly, the effects of the dollar's devaluation. The effects of the first apparently outweighed the second, since the rates of increase in commodity prices were far in excess of the effective dollar depreciation which in the last 2½ years has amounted to some 17-18 percent against the currencies of our 14 largest commercial markets. With an outlook for a generally favorable 1973/74 crop outturn partially offset by some stock rebuilding, and some forecasts of a slow-down in the GNP growth of major importing countries, 1974 prices may decline.

Reduced Stocks Affect Agricultural Trade and Prices

Stock depletion of several major agricultural commodities appears to have resulted in greatly increased advanced buying for shipment, processing, and consumption over a longer future term than in the past. When exporting countries, particularly the United States, had large stocks, importing countries could live more or less from hand to mouth. Now they seek to assure themselves of supplies for a relatively distant future by entering the market earlier than in the past.

Accurate quantification of this tendency is impossible because U.S. exporters were only recently required to report export sales outstanding for current and future marketing years. Nevertheless, as of mid-August, well before the beginning of the new soybean marketing year, intended U.S. soybean exports of 15.2 million metric tons were reported for the marketing year (September 1973 to August 1974). That quantity compares with 13.8 million tons of actual exports during fiscal year 1973. Further, intended exports during marketing year 1973/74 of 6.0 million metric tons of soybean meal were reported compared with 4.5 million tons actually exported in fiscal year 1973.

Substantially smaller quantities apparently were contracted for export a year ago and the large quantities now under contract for export appear to be mainly intended for a longer future period of use than the smaller quantities contracted for in the past. While the temporary embargo on U.S. oilseeds and oilseed products did not affect the quantity of exports other than during the third quarter, fears of further export limitations by the United States apparently boosted commitments. Thus, the current increase in the rate of export demand may not reflect an equivalent increase in the rate of actual use. If export demand declines to reflect more normal rates of use, price may fall.

The Effect of Higher Agricultural Prices on the EC

EC grain prices have long been high and largely insulated from world prices under the Common Agricultural Policy. Protein meal prices in the EC, however, were at world market levels. Thus, the steep increase in protein meal prices changed the protein meal to grain price ratio much more than in other areas where grain prices have also risen substantially. As a result, the EC tried to minimize protein meal use in its feed industries by substituting more grains and urea in the feed mix. The EC is also trying to develop its own oilseed production. However, recently protein meal prices have dropped closer to normal levels and the pressure to find substitutes has somewhat diminished. (Hans G. Hirsch and H. Christine Collins)

INTERNATIONAL MONETARY DEVELOPMENTS

Three primary international monetary developments may affect agricultural exports over the next 1 to 3 years: (1) the realignment of the U.S. dollar relative to other countries, (2) rapid economic growth in developed countries accompanied by somewhat rapid rates of inflation, and (3) strong

growth in the foreign exchange earnings and reserve positions of a number of less developed countries.

Since May 1971, the dollar has been realigned relative to the currencies of over 100 countries. At the extremes, for 118 countries for which data are available, the dollar has been depreciated about 33

Table 2.--Export-weighted average dollar depreciation, by commodity,
May 1971-September 1973 1/

Commodity	:Unadjusted for: Adjusted for	
	: nontariff : major nontariff	:trade barriers: trade barriers 2/
	<u>Percent</u>	
Animal and animal products	-7.11	-5.76
Meats and meat products	-14.27	-13.74
Poultry products	-7.36	-2.33
Hides and skins	-15.25	-15.25
Oils and fats	-4.13	-4.13
Tallow	-4.26	-4.26
Dairy products	-1.36	-0.82
Grains and preparations	-7.21	-4.32
Wheat and wheat products	-1.87	-1.11
Wheat	-2.22	-1.44
Rice	+1.18	+3.34
Feed grains and products	-13.12	-7.31
Corn	-13.57	-6.23
Grain sorghum	-20.76	-16.75
Oilseed and products	-14.34	-12.86
Soybeans	-20.52	-18.24
Fruits and preparations	-10.87	-10.78
Nuts and preparations	-19.09	-19.09
Vegetables and preparations	-4.11	-4.11
Feeds and fodders (excl. oil cakes and meal):	-13.51	-13.51
Tobacco	-13.42	-11.86
Cotton (excl. linters)	-10.53	-10.53
Total	-9.42	-7.80

1/ Basis of weighting, CY 1971 commercial exports by commodity, by country, and adjusted for transshipments.

percent against the German mark but has appreciated relative to the currency of the Khmer Republic by 362 percent. The dollar has been depreciated relative to the currency of over 70 nations; these nations took about four-fifths of U.S. commercial exports in 1971. The dollar has remained on an even basis, or has appreciated, relative to the currency of nearly 50 nations; these nations took about one-fifth U.S. commercial exports in 1971.

The effects of dollar realignment are likely also to vary from commodity to commodity. For some commodities the United States exports heavily to nations against whose currencies the dollar has depreciated. But for other commodities, the United States exports significant quantities to nations against whose currencies the dollar has remained unchanged or has appreciated. A calculation of effective average dollar realignment by commodity—using the value of exports in 1971 by commodity, by country, as a basis of weighting—gives 9.4 percent as the average effective dollar depreciation (table 2). In other words, prices for U.S. commercial agricultural exports (expressed in foreign currencies) are, on the average, 9.4 percent lower than they would have been in the absence of currency realignment. Against the 14 largest U.S. commercial markets, the average effective depreciation is 17 to 18 percent.

As for individual commodities, the average depreciation for soybeans and grain sorghums is just over 20 percent, and for corn, over 13 percent. Thus, the United States exports these commodities more than any others to nations where the dollar has depreciated significantly. For wheat, the average is only 2.2 percent, indicating that significant quantities are exported, commercially, to nations where the dollar has not depreciated. Rice was the only major commodity to show an appreciation, an average of 1.2 percent.

The Common Market's variable levy system and other arrangements under the Common Agricultural Policy, under normal circumstances, completely offset the effects of dollar depreciation. Thus, for certain commodities which we export to the Common Market, the effective dollar depreciation is zero. There are other nontariff barriers (NTB's) in Japan and elsewhere that have the same effects. When this adjustment (substituting zero for whatever degree of dollar depreciation has occurred against various

currencies) is made for the major NTB's around the world, the averages in the right-hand column of table 2 are obtained. As a result of this adjustment the average effective depreciation for agricultural commodities is reduced from 9.4 percent to 7.8 percent. For corn the average drops from 13.6 to 6.2 percent, but there is no change for cotton and a number of other commodities.

The second factor affecting farm exports is rapid economic growth overseas in developed countries. The Organization of Economic Cooperation and Development (OECD) forecast in June an annual growth rate for 1973 of 7 to 7.5 percent for its 24 member countries. For the first time in recent history the economies of Europe, North America, and Japan were expanding simultaneously, but they were also experiencing inflation. Some of the expansionary pressures appear to be diminishing in the United States, but such pressures were expected to continue unabated well into 1974 in Europe and Japan. The development of a serious shortage of crude oil could alter these expectations by causing a slowing of the economies of these countries. A slowdown would lessen the demand for farm exports in both developed and less developed countries (LDC's).

The economic boom in the developed countries is improving the world market for farm exports indirectly by also creating a strong demand and higher prices for the raw materials exported by the less developed nations. The high value of their exports, which is adding to their foreign exchange earnings and reserves, may give strong support to our farm exports. During fiscal 1973, the LDC's as a group increased their reserves by \$11.8 billion, or 43.5 percent. At least seven countries doubled their reserves. On June 30, 1971, reserves of the LDC's covered 36 percent of the annual value of imports. Two years later they covered 58 percent. At least seven countries have reserves that cover a full year's imports. Of course, there are exceptions to this picture for some major LDC's—India, for example—and recent data are not available for others. Unless they are oil-exporting nations, the LDC's of Africa and Asia are doing less well than other LDC's. But in general the LDC's are doing better than ever before, and the currently high level of foreign exchange reserves should provide an impetus for U.S. exports well into 1974 and perhaps even into 1975. (O. Halbert Goolsby)

U.S. AGRICULTURAL TRADE

Agricultural Exports Continue to Climb

U.S. exports of farm products in fiscal 1973 (July 1972-June 1973) rose to a record \$12.9 billion—60 percent larger than in fiscal 1972. Major developments contributing to the rise included

unfavorable weather in 1972 that sharply reduced harvests in the Soviet Union, Southeast Asia, Australia, parts of Latin America, and Africa; increased demand for farm products because of continued rising incomes in Western Europe, Canada, and Japan; reduced fishmeal output in Peru;

improved competitive position of U.S. products because of currency realignments; and the low level of supplies in other exporting countries.

The volume of U.S. farm products gained nearly one-third in fiscal 1973 and accounted for about 60 percent of the total value gain. Higher prices accounted for for the other two-fifths of value increase, especially for soybeans, soybean meal, wheat, feed grains, most fruits and vegetables, cattle hides, meats, tobacco, and nuts.

Grains and grain products accounted for about half of the value increase in agricultural exports and totaled \$5.3 billion, double the level of a year earlier.

Most of the gains in U.S. agricultural exports were accounted for by Japan (22 percent of the total gain), Western Europe (30 percent), USSR (16 percent), and the People's Republic of China (4 percent). But all major areas took more U.S. products in fiscal 1973 than they did a year earlier.

Based on information available as of early November, fiscal 1974 agricultural exports are expected to continue the sharp upward movement of last year, to reach an expected total of \$19 billion.⁴ While increased volume accounted for about 60 percent of the value gain during fiscal 1973, most of the increase in the value of farm exports will stem from higher prices, especially for wheat, feed grains, rice, soybeans, soybean meal, cotton, and some horticultural products.

Although prices will account for much of the increase in value, average export prices for most commodities will probably be substantially below the peak levels that occurred in the late summer of 1973 for most products. Sales made early in fiscal 1973,

including the large wheat sales to the USSR, occurred before the sharp rise in prices. Thus, last year's exports did not fully reflect the price increases.

Prices so far this year are well above those of a year earlier, and will continue to be quite sensitive to changes in production, stocks, and to the international situation. Thus, prices could still show some substantial change during the current fiscal year that would sharply modify the current value estimate for U.S. agricultural exports.

The rise in U.S. farm product exports this fiscal year will be the fifth straight increase from the \$5.7 billion in fiscal 1969. Although higher prices account for most of the expected increase during the current fiscal year, other forces play a prominent role, including (1) very tight world grain supply situation, (2) a continuing rapid improvement in economic conditions around the world, (3) expansion of trade with the USSR and the People's Republic of China, (4) the realignment of currencies in the past few years, and (5) the availability of U.S. supplies and the capability to move large quantities of grains and oilseeds into the international market.

Agricultural Imports to Increase

Sharply higher prices and selected volume gains are expected to raise U.S. agricultural imports well above the \$7.3 billion record of fiscal 1973. Price increases will account for much of the gain. Part of the increase in farm product imports which compete directly or indirectly with domestic items is expected to result from volume gains, principally for dairy products, meat, fruits, vegetables, wines, and tobacco. However, much of the increase will be attributable to price effects. For noncompetitive items—largely tropical products—price increases will account for nearly all of the anticipated increase over fiscal 1973's \$2.6 billion. A few items may increase in volume such as bananas, processed coffee, tea, and carpet wool, but these could be offset by volume reductions for green coffee, cocoa beans, crude rubber, and spices. (Dewain H. Rahe)

TRADE NEGOTIATIONS

Early this year, the United States began negotiations with the European Economic Community (EC) over adjustments in EC trading practices to offset losses of trading rights suffered by the United States because of the enlargement of the Community through the accession of the United Kingdom, Ireland, and Denmark. These trading rights, many of them concerning agricultural products which we export, were acquired from EC countries through previous trade negotiations under the General Agreement on Tariffs and Trade (GATT). The negotiations are taking place in accord with

Article 24.6 of that agreement and are now in an intermediate stage.

Also, the United States is participating in major new international trade negotiations which began this September among representatives of the more than 90 countries which are GATT members. This new round of multilateral talks, agreed to first by the United States, the EC, and Japan in February 1972 and later by other GATT members, will explore avenues to eliminating or reducing roadblocks to agricultural and industrial trade, especially nontariff barriers. Because the problems are difficult,

⁴For detailed forecasts of commodity trade, see *Outlook for U.S. Agricultural Exports*, November 6, 1973. Those forecasts, however, were prepared before the full extent of the international energy crisis was recognized. The energy crisis, if long continued, may have a dampening effect on U.S. agricultural exports, but the extent of the possible loss cannot be quantified at this time.

negotiations could be lengthy—measured in many months rather than weeks.

If both these sets of negotiations now underway were to succeed, they would offset lost U.S. rights and revise trade rules toward greater market orientation and a better chance for efficient producers to compete

on fair terms. That would constitute a signal that world demand for U.S. farm commodities had increased. U.S. farmers might then respond over the longer term by substantially increasing supplies of needed food and fiber both domestically and in world commerce. (Joseph R. Barse)

PROSPECTS GOOD FOR WORLD GRAIN CROPS

World grain prospects for 1973/74 point to record crops (tables 3-7). Supplies of grain will be adequate to allow total and per capita world disappearance⁵ to increase (tables 3 and 4). Rice supplies are the tightest among major commodities and will remain so, at least until the Asian harvests are completed this year. Wheat is next in line, while coarse grains have the most breathing room. However, grain supplies are likely to remain relatively tight through 1973/74 and well into 1974/75. Recovery in grain carryover stocks of the major exporting countries probably will not occur before the end of the 1974/75 season.

Total wheat and coarse grain production is up in the United States, Canada, Australia, USSR, and China (tables 5 and 6). European grain production is slightly over last year's record level. Rice production is also expected to be up sharply in the major producing regions (table 7).

However, the size and composition of the 1973 grain crops in the USSR and People's Republic of China and the countries' possible import purchases or export sales have been the subject of much speculation. A disastrous drought in West Africa has continued, and a flow of emergency food supplies is being distributed there. Turkey, Syria, Cyprus, Jordan, and much of North Africa have also suffered drought, and their 1973 wheat and barley crops are down from last year. Jordan and Cyprus had an almost complete wheat crop failure.

Estimated 1973/74 disappearance exceeds the record world grain production in prospect. However, the deficit is small, and there were well over 100 million tons of wheat and feed grain stocks on July 1 in the United States, Canada, Australia, and Argentina to make up for it.

Estimated per capita disappearance of grains on a world basis is up slightly over last year (table 4). The increase occurs in coarse grains, with little change indicated for wheat and rice. Current high grain prices could well reduce disappearance below levels estimated here for some regions even though prices are up for most commodities. Prices are so much higher than usual that their full impact on disappearance has probably been underestimated.

Record world wheat production and record disappearance in 1973/74 are likely (table 5). Wheat imports will probably be less than last year's record, but well above any other year.

Estimated wheat production in 1973/74 will be up 27 million tons or 8 percent above 1972/73 and 17 million tons above the record crop of 1971/72 (table 5). Wheat stocks, however, in just the four major exporting countries⁶ on July 1 exceeded 29 million tons, equal to 8 percent of estimated world disappearance. In addition, carryover wheat stocks in many other countries often account for 1 to 3 months of domestic disappearance.

A drawdown in stocks is necessary if disappearance estimates used here are fully met. Disappearance has generally increased at a rate just faster than population growth. The declining per capita use of wheat for food in the developed world is generally about offset by increased feed use for livestock and by food use in regions where wheat products are replacing other food grains as incomes rise (table 4).

The 1973/74 large imports are due to many factors. Among them are (1) lower grain production in North Africa, Central Africa, and West Asia which will require larger imports to fill domestic needs; (2) growing demand for wheat in Japan, South Korea, and in other countries where higher incomes and a desire to substitute wheat for rice or corn is coupled with an apparent inability to produce wheat; (3) immediate needs of Asian countries, especially of India and Bangladesh for wheat to fill consumption gaps following last season's rice and coarse grain crop disaster and preceding harvest of this year's fall crops; and (4) continued large imports by the USSR and the People's Republic of China.

World coarse grain production, disappearance, and trade for 1973/74 are expected to be the largest ever (table 6). Coarse grain production may be up some 49 million tons over last year.

Stocks on July 1, 1973, of rye, barley, oats, and corn in the United States, Canada, Argentina, and Australia exceeded 73 million tons. These stocks are equal to 11 percent of estimated 1973/74 world coarse grain disappearance. However, a large part of the expected increase in production and exportable

⁵Disappearance = production and net trade and change in stocks (when stock data are available). Two of the bigger countries for which no stock data were available are the USSR and China.

⁶July 1 stocks in the United States, Canada, Argentina, and Australia.

Table 3--Total grains (wheat, coarse grain and milled rice): Production, disappearance and net trade

Region or country	1964/65-1966/67			1969/70-1971/72			1971/72			1972/73 2/			1973/74 3/		
	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net
	:	:	1/	:	:	1/	:	:	1/	:	:	1/	:	:	1/
Million metric tons															
Developed															
United States	175.1	144.7	43.3	208.7	168.3	39.3	236.5	174.2	40.0	226.8	179.5	70.1	239.2	177.7	74.4
Canada	33.1	18.1	14.3	34.8	22.4	14.7	38.8	23.5	18.4	35.6	23.6	18.7	37.6	22.9	17.1
EC-9	79.6	100.0	-20.0	93.2	110.4	-16.6	100.4	112.0	-14.3	103.1	117.4	-13.1	105.4	118.4	-12.5
O.W. Europe	22.8	28.2	-5.8	29.0	33.9	-5.0	32.6	33.7	-4.6	30.2	36.5	-5.2	28.8	36.5	-7.4
Japan	14.0	23.9	-10.3	12.7	28.2	-14.4	10.9	28.8	-15.0	11.5	29.4	-16.8	11.6	30.2	-18.8
Aust. & N.Z.	13.5	5.3	7.0	14.9	6.0	10.8	15.4	6.8	12.1	11.0	6.7	7.3	17.3	6.7	8.8
South Africa	7.9	5.6	0	10.1	6.9	1.2	11.7	7.3	2.9	6.3	7.6	3.4	10.2	7.8	.3
Total	346.0	325.8	28.5	403.4	376.1	30.0	446.3	388.3	39.5	424.5	400.7	64.4	450.1	400.2	61.9
Communist															
East. Europe	64.8	71.7	-7.0	75.0	82.2	-7.3	82.1	90.1	-8.6	87.4	94.4	-6.6	89.2	95.4	-6.3
USSR	139.6	139.9	-2	168.8	164.9	4.0	173.7	175.1	-5.8	160.1	179.1	-19.0	204.2	209.4	-5.2
China	139.6	144.2	-4.5	159.3	162.4	-3.1	164.0	166.3	-2.3	160.6	165.9	-5.3	168.0	176.3	-8.1
Total	344.1	355.8	-11.7	403.1	409.5	-6.4	419.8	431.5	-16.7	408.1	439.4	-30.9	461.4	481.1	-19.6
Less developed															
Mexico & Cent. Am.	13.7	14.3	-5	16.0	18.0	-1.8	16.8	19.4	-2.1	14.8	19.2	-4.0	16.3	20.4	-4.0
Brazil	17.0	18.1	-1.9	20.6	21.7	-7	20.0	23.3	-8	19.4	22.4	-2.7	21.9	24.0	-2.4
Argentina	17.7	8.7	10.2	19.3	10.7	8.3	15.5	10.3	7.6	22.2	11.3	7.6	20.8	12.0	9.2
O.S. America	7.3	9.0	-1.8	7.6	10.8	-3.1	7.4	11.4	-3.8	7.2	11.5	-4.3	7.2	12.4	-5.1
North Africa	11.6	14.8	-3.2	15.0	18.3	-3.3	15.6	18.8	-3.3	16.4	19.5	-3.2	15.0	19.1	-4.3
Central Africa	27.7	28.3	-7	30.7	31.8	-1.0	30.9	31.9	-1.2	29.2	30.2	-1.0	27.0	28.3	-1.3
West Asia	25.9	28.4	-2.5	29.4	34.2	-5.1	30.5	33.8	-6.6	32.1	35.8	-3.4	28.1	35.4	-6.1
South Asia	86.0	96.5	-10.1	114.1	118.0	-4.7	114.4	115.5	-3.5	109.9	121.0	-4.4	122.0	131.2	-8.5
S.E. Asia	30.6	16.3	3.4	25.6	22.0	3.6	25.0	21.1	4.2	21.3	20.6	1.6	25.7	22.5	3.1
East Asia, Pac.	24.5	27.8	-3.4	31.2	38.4	-7.7	32.4	40.1	-8.9	30.9	42.5	-9.9	34.0	45.5	-10.9
Total	262.0	262.2	-10.5	309.5	323.9	-15.5	308.5	325.6	-18.4	303.4	334.0	-23.7	318.0	350.8	-30.3
World total	952.1	943.8	6.3	1,116.0	1,109.5	8.1	1,174.6	1,145.4	4.4	1,136.0	1,174.1	9.8	1,229.5	1,232.1	12.0

1/ Minus indicates net trade imports. Total may not add due to rounding or stock changes. 2/ Preliminary. 3/ Projected.

Sources: The sum of tables 5, 6, and 7.

Table 4--Per capita world grain disappearance and production

Grain and Year	United States	Canada	EC-9	Other West	Japan	Australia and New Zealand	South Africa	Total developed	East Europe	USSR	China	Total Central Plan
Kilograms per person												
Disappearance												
Wheat												
1964-66	99	218	151	127	49	207	53	118	219	345	39	123
1969-71	105	225	161	132	51	183	54	123	247	362	33	122
1971/72	111	232	159	132	50	224	57	126	273	393	32	129
1972/73	102	219	169	132	52	220	63	127	273	398	36	132
1973/74	96	208	160	120	53	199	53	119	278	421	38	137
Milled rice												
1964-66	5	2	3	6	121	3	4	21	3	3	75	52
1969-71	6	2	3	6	114	2	3	21	3	5	77	54
1971/72	6	2	3	6	118	3	4	21	4	5	79	56
1972/73	6	3	3	6	111	3	4	20	4	6	75	54
1973/74	6	2	3	6	98	3	4	18	4	6	77	56
Coarse grains												
1964-66	631	701	255	223	73	171	211	345	370	258	78	147
1969-71	700	822	273	276	106	209	228	388	405	312	84	164
1971/72	714	857	278	295	104	212	234	397	436	316	84	167
1972/73	742	854	286	301	111	201	231	408	464	320	79	166
1973/74	731	824	296	311	129	217	241	413	462	412	84	185
Total grains												
1964-66	735	921	410	356	242	382	267	844	592	606	192	322
1969-71	811	1,049	437	413	270	395	286	532	655	679	194	340
1971/72	830	1,090	440	433	272	438	294	544	713	715	194	351
1972/73	850	1,076	458	439	275	424	298	555	741	724	190	352
1973/74	833	1,034	459	437	279	419	298	550	744	839	199	378
Per capita consumption:												
Total grains												
1964-66	899	1,680	326	287	142	964	378	514	535	605	186	312
1969-71	1,005	1,634	369	354	122	974	419	570	597	695	190	334
1971/72	1,127	1,796	395	395	103	987	472	625	649	709	192	342
1972/73	1,072	1,626	402	363	108	692	247	588	686	647	184	325
1973/74	1,120	1,701	408	345	107	1,075	389	618	695	818	188	363

Continued

Table 4--Per capita world grain disappearance and production (Continued)

Grain and year	Mexico :Cent. : Amer.: : Caribbean :	Brazil :	Argentina : : : : : : : : : :	Other S. : : : : : : : : : :	North : : : : : : : : : :	Africa : : : : : : : : : :	Central : : : : : : : : : :	West : : : : : : : : : :	South : : : : : : : : : :	East : : : : : : : : : :	Asia : : : : : : : : : :	Pac. : : : : : : : : : :	East : : : : : : : : : :	Total : : : : : : : : : :	Less : : : : : : : : : :	World : : : : : : : : : :
Kilograms per person																
Disappearance																
Wheat																
1964-66	36	33	174	62	102	5	173	38	1	9				41		83
1969-71	39	40	174	62	108	6	187	42	1	16				46		85
1971/72	41	39	180	66	107	6	176	42	2	16				45		87
1972/73	39	36	145	61	110	6	186	51	2	16				49		89
1973/74	41	42	171	64	106	6	180	52	2	17				50		91
Milled rice																
1964-66	13	53	5	17	13	14	13	73	160	93				60		49
1969-71	13	52	6	19	14	15	16	81	190	108				67		54
1971/72	14	53	6	20	15	16	16	79	177	109				66		54
1972/73	14	55	7	20	15	16	16	78	166	112				65		53
1973/74	14	54	6	20	14	16	17	80	176	116				67		54
Coarse grains																
1964-66	130	134	210	64	83	116	108	38	2	30				65		148
1969-71	141	140	264	67	92	112	107	41	3	34				68		160
1971/72	146	147	233	67	92	110	104	36	3	35				66		161
1972/73	140	133	302	69	92	99	103	31	4	37				63		161
1973/74	144	138	298	72	86	89	97	38	4	39				64		168
Total grains																
1964-66	179	219	389	143	198	135	293	150	164	132				166		281
1969-71	194	233	444	148	214	134	309	164	194	159				181		299
1971/72	201	239	418	152	214	131	297	157	182	161				177		303
1972/73	193	223	454	149	216	121	306	160	172	166				177		303
1973/74	199	234	475	156	206	111	295	170	182	172				181		313
Per capita consumption:																
Total grains																
1964-66	171	206	790	116	155	132	268	134	308	116				166		283
1969-71	171	218	798	105	175	129	266	159	226	129				173		301
1971/72	175	205	633	99	178	127	268	155	215	130				168		311
1972/73	149	194	895	93	182	117	274	146	178	120				161		294
1973/74	159	213	825	91	162	105	234	158	209	129				164		312

Source: Computed from data in tables 5, 6, and 7. Levels need to be used carefully. Some regional data are incomplete lacking production or trade of some grains. Also stock data were not available for some countries, the largest being USSR and China.

Table 5--World wheat: Production, disappearance and net trade 1/

Country	1964/65-1966/67				1969/70-1971/72				1971/72				1972/73				1973/74				Net 2/ trade
	Prod.	Disap.	Net 2/ trade	Prod.	Disap.	Net 2/ trade	Prod.	Disap.	Net 2/ trade	Prod.	Disap.	Net 2/ trade	Prod.	Disap.	Net 2/ trade	Prod.	Disap.	Net 2/ trade			
Million metric tons																					
Developed																					
United States	35.4	19.5	20.2	40.0	21.7	17.9	44.0	23.2	17.2	42.0	21.6	32.2	47.0	20.5	31.9						
Canada	18.8	4.3	13.6	14.0	4.8	11.6	14.4	5.0	13.7	14.5	4.8	15.7	17.1	4.6	14.3						
EC-9	33.1	36.9	-3.5	36.9	40.6	-3.4	39.8	40.5	-2.2	41.2	43.4	-0.7	41.2	41.4	-0.9						
O.W. Europe	9.5	10.1	-1.0	9.9	10.0	-0.8	11.6	10.9	-0.7	9.9	11.0	-0.3	9.1	10.0	-0.8						
Japan	1.2	4.8	-3.7	0.6	5.3	-4.7	0.4	5.3	-4.9	0.3	5.6	-5.4	0.2	5.7	-5.6						
Aust. & N.Z.	10.2	2.9	6.2	9.3	2.8	8.5	8.9	3.5	8.7	6.9	3.5	5.5	11.3	3.2	6.5						
South Africa	0.8	1.1	-0.3	1.4	1.3	-0.1	1.6	1.4	3/	1.7	1.6	0.2	1.6	1.4	0.3						
Total	109.0	79.6	31.5	111.8	87.3	29.0	120.1	89.8	31.8	116.5	91.5	47.2	127.5	86.8	45.7						
Communist																					
East. Europe	20.9	26.5	-5.7	26.3	31.0	-4.9	30.2	34.5	-4.6	30.7	34.8	-4.0	31.0	35.6	-4.6						
USSR	78.2	79.7	-1.5	92.8	88.0	-4.8	98.8	96.4	-2.1	85.8	98.5	-12.7	105.0	105.0	0						
China	23.7	29.1	-5.4	23.8	27.7	-3.9	24.0	27.0	-3.0	26.0	31.4	-5.4	27.0	33.5	-6.5						
Total	122.8	135.3	-12.6	142.9	146.7	-4.0	153.0	157.9	-9.7	142.5	164.7	-22.1	163.0	174.1	-11.1						
Less developed																					
Mexico & Cent. Am.	1.9	2.9	-0.9	2.1	3.6	-1.4	1.9	3.9	-2.0	1.7	3.9	-2.2	1.9	4.2	-2.2						
Brazil	6.3	2.7	-2.4	1.6	3.5	-1.8	2.0	3.8	-1.6	0.7	3.6	-2.9	1.9	4.3	-2.4						
Argentina	7.9	3.9	5.1	5.9	4.2	1.5	5.7	4.4	1.2	6.8	3.6	3.3	5.4	4.3	1.5						
O. S. America	2.1	3.9	-1.9	1.9	4.5	-2.6	1.6	4.9	-3.2	1.3	4.7	-3.3	1.2	5.1	-3.9						
North Africa	4.0	7.6	-3.6	5.3	9.2	-3.7	5.8	9.4	-3.6	6.3	9.9	-3.5	5.6	9.8	-4.2						
Central Africa	0.9	1.0	-0.2	1.0	1.5	-0.4	1.0	1.5	-0.5	1.0	1.5	-0.4	1.0	1.6	-0.6						
West Asia	14.9	16.7	-1.7	17.5	20.7	-3.5	18.6	20.1	-4.3	20.1	21.8	-1.2	17.4	21.7	-3.4						
South Asia	15.3	24.5	-8.9	27.9	30.6	-3.9	30.9	31.2	-2.8	33.6	38.7	-3.5	32.6	40.3	-6.9						
S.E. Asia	0.1	0.1	-0.1	2/	0.1	-0.2	0.1	0.2	-0.1	0.1	0.2	-0.1	0.1	0.2	-0.1						
East Asia, Pac.	0.3	1.8	-1.5	0.4	3.9	-3.7	0.3	4.0	-3.7	0.2	4.2	-3.9	0.2	4.6	-4.5						
Total	47.7	65.1	-16.1	63.6	81.8	-19.6	67.5	83.4	-20.6	71.8	92.1	-17.7	67.3	96.1	-26.7						
World total	279.5	280.0	2.8	318.3	315.8	5.4	340.6	331.1	1.5	330.8	346.3	7.4	357.0	357.0	7.9						

1/ Includes production harvested during July/June year and wheat harvested in early-harvesting Northern Hemisphere countries which are moved forward. Trade is generally on July/June or an August/July year. Disappearance is the sum of production plus net trade. Stock changes were taken into account if data were readily available. 2/ Minus indicates net imports. Production less disappearance may not equal net trade because of stock changes or rounding. The largest countries with no stock data are the USSR and China. 3/ Less than 50,000 metric tons. 4/ Preliminary. 5/ Projected.

Table 6--Coarse grains: Production, disappearance and net trade 1/

Region	1964/65-1966/67			1969/70-1971/72			1971/72			1972/73			1973/74		
	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net
	:	:	2/	:	:	2/	:	:	2/	:	:	2/	:	:	2/
Million metric tons															
Developed															
United States	137.2	124.3	21.6	165.8	145.4	19.7	189.7	149.8	20.8	182.0	156.7	35.8	189.1	156.0	40.5
Canada	14.3	13.8	.8	20.8	17.5	3.2	24.4	18.5	4.7	21.1	18.7	3.1	20.5	18.2	2.8
EC-9	46.0	62.3	-16.2	56.0	69.0	-13.2	60.0	70.8	-12.1	61.4	73.3	-12.2	63.5	76.3	-11.6
O.W. Europe	12.9	17.7	-4.8	18.7	22.6	-4.1	21.2	24.3	-3.8	19.9	25.0	-4.8	19.3	26.0	-6.6
Japan	1.4	7.2	-5.8	.7	11.0	-10.3	.6	11.0	-10.3	.4	11.9	-12.0	.3	13.9	-13.6
Aust. & N.Z.	3.2	2.4	.7	5.4	3.2	2.1	6.3	3.3	3.2	4.0	3.2	1.7	5.8	3.5	2.1
South Africa	7.1	4.4	.4	8.7	5.5	1.4	10.1	5.8	3.0	4.6	5.9	3.3	8.6	6.3	.1
Total	222.1	232.1	-3.3	276.1	274.2	-1.2	312.3	283.5	5.5	293.4	294.7	14.9	307.1	300.2	13.7
Communist															
East. Europe	43.8	44.8	-1.0	48.6	50.9	-2.2	51.7	55.1	-3.7	56.5	59.1	-2.3	58.0	59.3	-1.4
USSR	61.1	59.6	1.5	75.2	75.8	-.5	74.0	77.5	-3.4	73.2	79.2	-6.0	98.0	102.9	-4.9
China	58.3	58.4	-.1	70.7	70.7	3/	72.0	72.0	0	68.0	68.8	-.8	71.0	73.7	-2.5
Total	163.2	162.8	0.4	194.5	197.4	-2.7	197.7	204.6	-7.1	197.7	207.1	-9.1	227.0	235.9	-8.8
Less developed															
Mexico & Cent. Am.	11.1	10.4	0.8	13.0	13.2	-0.1	13.9	14.1	0.3	12.1	13.9	-1.5	13.3	14.7	-1.4
Brazil	12.2	11.0	.4	13.9	13.3	1.0	13.2	14.3	.6	13.7	13.3	.2	14.2	14.2	3/
Argentina	9.7	4.7	5.1	13.2	6.4	6.7	9.6	5.7	6.3	15.2	7.5	4.3	15.2	7.5	7.7
O.S. America	3.9	4.0	-.1	4.2	4.9	-.6	4.2	5.0	-.7	4.2	5.3	-1.1	4.3	5.7	-1.4
North Africa	6.3	6.2	0.1	7.9	7.9	-0.1	8.0	8.1	-0.1	8.2	8.3	-0.1	7.5	8.0	-0.5
Central Africa	24.5	24.4	.1	26.7	26.6	.1	26.8	26.5	.1	25.1	24.7	.3	22.9	22.7	.2
West Asia	10.1	10.4	-0.4	10.6	11.8	-1.2	10.6	11.9	-1.7	10.7	12.1	-1.3	9.4	11.7	-1.9
South Asia	24.8	25.0	-.1	28.9	29.3	-.1	26.2	26.4	3/	22.6	23.7	-.9	28.6	29.1	-1.0
S.E. Asia	12.3	.2	1.1	2.2	.4	1.9	2.6	.4	2.3	1.7	.5	1.4	2.9	.5	2.3
East Asia, Pac.	6.3	6.4	-.2	7.0	8.3	-1.6	6.8	8.8	-2.2	6.1	9.5	-3.0	7.1	10.2	-3.3
Total	121.2	102.7	6.8	127.6	122.1	6.0	121.	121.2	4.9	119.6	118.8	-1.7	125.4	124.3	.7
World total	506.5	497.6	3.9	598.2	593.7	2.1	631.8	609.3	3.3	610.7	620.6	4.1	659.5	660.4	5.6

1/ Includes production harvested during July/June year and small grain in early-harvesting Northern Hemisphere countries which are moved forward. Trade is generally on a July/June, or August/July year. Disappearance is the sum of production plus net trade. Stock changes were taken into account if data were readily available. 2/ Minus indicates net imports. Production less disappearance may not equal net trade because of stock changes or rounding. The largest countries with no stock data are the USSR and China. 3/ Less than 50,000. 4/ Preliminary. 5/ Projected.

Sources: FAS Grain Division's grain supply and distribution tables; ERS Foreign Demand and Competition Division's production indices; and various agricultural attache and trade reports.

Table 7--Milled rice: Production, disappearance and trade

Country or region	1964/65-1966/67			1969/70-1971/72			1971/72			1972/73			1973/74		
	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net	Prod.	Disap.	Net
	:	:	2/	:	:	2/	:	:	2/	:	:	2/	:	:	2/
	Thousand metric tons														
Developed															
United States	2,533	963	1,527	2,852	1,176	1,733	2,818	1,163	1,922	2,797	1,235	2,088	3,100	1,245	1,965
Canada	--	45	-45	--	50	-50	--	49	-49	--	55	-55	--	49	-49
EC-9	453	760	-307	600	785	-11	628	712	-31	527	724	-190	673	736	-47
O.W. Europe	422	445	20	433	493	-60	382	489	-88	374	485	-87	372	489	-83
Japan	11,447	11,923	-750	11,399	11,862	561	9,907	12,459	214	10,826	11,878	620	11,080	10,600	399
Aust. & N.Z.	136	44	71	187	37	150	181	39	170	146	40	146	188	40	163
South Africa	2	75	-73	10	82	-72	10	90	-87	10	92	-95	10	95	-90
Total	15,013	14,244	443	15,481	14,485	2,251	13,926	15,001	2,121	14,680	14,509	2,427	15,423	13,254	2,258
Central Plan															
East. Europe	99	389	-290	115	346	-231	207	530	-323	193	499	-295	227	505	-301
USSR	341	588	-247	827	1,127	-300	930	1,230	-300	1,066	1,366	-300	1,170	1,470	-300
China	57,633	56,656	977	64,833	64,048	785	68,000	67,270	730	66,640	65,740	900	70,040	69,140	900
Total	58,073	57,633	440	65,775	65,521	254	69,137	69,030	107	67,899	67,605	305	71,437	71,115	299
Less developed															
Mexico & Cent. Am.	665	1,032	-367	915	1,248	-331	1,005	1,367	-376	985	1,354	-344	1,065	1,458	-379
Brazil	4,472	4,357	115	5,057	4,934	123	4,828	5,185	149	5,032	5,478	-29	5,786	5,548	100
Argentina	141	118	29	218	136	82	187	150	82	191	165	29	195	160	35
O.S. America	1,272	1,076	196	1,493	1,367	126	1,619	1,492	94	1,670	1,515	97	1,731	1,562	193
North Africa	1,301	960	341	1,764	1,217	547	1,804	1,294	416	1,851	1,315	407	1,860	1,308	422
Central Africa	2,320	2,928	-605	2,976	3,658	-682	3,122	3,785	-768	3,106	3,980	-860	3,114	4,024	-907
West Asia	921	1,275	-354	1,327	1,743	-416	1,256	1,837	-578	1,283	1,890	-871	1,285	2,028	-828
South Asia	45,868	47,005	-1,137	57,283	58,116	-833	57,688	57,880	-732	53,711	58,624	-10	60,750	61,800	-600
S.E. Asia	18,215	15,951	2,419	23,440	21,510	1,930	22,251	20,535	1,964	19,475	19,851	325	22,710	21,620	925
East Asia, Pac.	17,867	19,595	-1,728	23,849	26,218	-2,369	25,287	27,298	-2,797	24,567	28,833	-2,986	26,650	30,728	-3,149
Total	93,042	94,297	-1,091	118,322	120,147	-1,823	119,047	120,823	-2,546	111,871	123,085	-4,242	125,146	130,386	-4,188
World total	166,128	166,185	-208	199,578	200,153	-682	202,110	204,854	-318	194,450	205,199	-1,510	212,006	214,755	-1,631

1/ Production primarily in initial calendar year is combined with trade in the following calendar year to get disappearance in year shown. Some regions do not balance because of change in stocks.

2/ Minus indicates net imports.

Sources: FAS Grain Division's grain supply and distribution tables; ERS Foreign Demand and Competition Division's production indices; and various agricultural attaché and trade reports.

supply of coarse grain will occur late in 1973 or early in 1974. Exports from this production will not be available until late in the fiscal year. The Argentine and Australian corn and sorghum harvests start around March and the South African corn harvest is in May and June. Therefore, stock drawdowns in the United States and Canada are expected since they will be the major source of exports until harvests in the Southern Hemisphere countries.

Estimated world coarse grain import demand for 1973/74 will show a 3-million-ton increase over 1972/73—less than the 9-million-ton increase the year earlier. The increases are spread generally throughout the world.

Current rice crop conditions indicate that world rice production will recover from last year's shortfall and possibly reach a record level (table 7). Disappearance needs and import demand are increasing rapidly, however, and the outlook is for continued tightness of supplies in 1974, with prices still high, although somewhat lower than in late 1973. Unusually low rice stocks throughout the world signal a risky situation. The major harvest period, October-January, is critical. Prospects for U.S. commercial exports are favorable, even if the expected recovery in output occurs.

World rice production⁷ in 1973/74 could reach a record 212 million tons (including estimates for the People's Republic of China, North Vietnam, and North Korea). Last year's production was down about 4 percent from 1971/72, while this year's production is forecast at 9 percent above last year's, or 5 percent over 1971/72. World rice supplies in 1974 appear to be just adequate to meet disappearance needs, without further drawdown on presently low rice stocks, but with little margin for rebuilding rice reserves.

World rice production needs to increase at about 2.5 percent a year just to maintain per capita disappearance levels, without allowing for incremental demand from higher incomes. Asia accounts for about 90 percent of world rice output and disappearance. Its 1973/74 rice production is forecast to increase at a maximum of only 4.4 percent over production 2 years ago, or less than 2.5 percent per year.

Grain and protein feed prices are at record levels and continue to fluctuate widely. Wheat prices have continued to climb, even during this year's record U.S. harvest. Perhaps the main reason for the unusual market behavior has been the uncertainty surrounding world production coupled with low grain stocks. On July 1 of this year wheat stocks in the four major exporting countries were at the lowest level in two decades. Coarse grain stocks were the lowest since 1967. Grain stocks in many other countries such

as Brazil, Thailand, India, and South Africa also have been drawn down. Thus, stocks to protect against major crop failures were thin.

Therefore, the size of current and future crops is of great concern. Despite record world harvest, 1972/73 crop output in some areas has been disappointing. India's wheat crop harvested in March and April 1973 was not as large as hoped for. An apparent overestimation of the 1972/73 Argentine wheat crop and subsequent wheat purchases by Argentina have added to the concern. In addition, a small Argentine wheat crop is expected from the harvest now underway.

Higher prices alone have made the world picture especially difficult to assess. Major currency realignments within the past year further increase the problem. Because of changes in exchange rates, prices stated in U.S. dollars do not reflect actual prices facing some major consuming countries. Grain and meal prices in terms of Japanese yen have increased much less than dollar quotations. The West German or French purchaser also has seen a smaller price rise for soybeans than the American due to the currency realignments.

Many countries since the summer of 1973 have used embargoes, quotas, export taxes, or other means to restrict exports. A few countries where restrictions have been or are still imposed are: The United States and Brazil for soybeans; Thailand, Burma, and EC-9 for rice; Argentina and the European Community for wheat; and Brazil and Thailand for corn.

In view of all the uncertainty, the United States in the summer of 1973 started requiring exporters to report unfilled grain and soybean export contracts. Reported contracted amounts indicate record grain exports but the figures are hard to evaluate and reported amounts do not have to be exported in the marketing year shown.

The effects of the current world grain and feed situation will be widespread. The current high prices will reduce the amount of grain and meal consumed. Grain and meal substitutes will be used and their prices will reflect the larger use. Many countries and international organizations are looking hard at their food reserve policies. Alternative reserve plans have been proposed. Grain farmers in the United States, Canada, and Australia are being encouraged to produce all the grain they can for their next harvest. Larger grain production in many other countries is being stimulated by higher prices and special incentives. Scattered reports indicate more irrigation facilities, fertilizers, machinery, and improved seeds are being purchased around the world in spite of shortages and higher prices of inputs. All of the above could add up in a few years to substantial production increases with pressures on prices and larger stockpiles of grains. (John Earl Hutchison and Robert D. Barry)

⁷All rice numbers in this section are given on a milled basis.

INTERNATIONAL OILMEAL SITUATION TO IMPROVE IN 1974

Present indications are that the tight oilmeal supply-demand situation will loosen considerably in 1974. Total meal production is expected to be up over 9.2 million tons while consumption will rise only 4 million tons for the regions covered in this section (see table 8 for the countries included in each region). The United States is expected to account for most of the production increase (5.7 million tons) but only a fourth of the consumption increase. Other countries anticipate large production increases in 1974. In Brazil a 900,000-ton increase is in prospect due almost entirely to increased soybean production. Peru could perhaps double last year's low fishmeal production because of improved fishing prospects. The USSR will produce more meal from increased sunflower, cottonseed, and soybean production. India will produce and export more peanut meal.

Much of the recent confusion in world feed markets originated with reactions to weather in the United States in the fall of 1972. In early September 1972, all indications were that the United States would harvest record corn and soybean crops. However, untimely rains during the next 3 months caused considerable field losses which reduced average yields. But even more important—since total production was still a record—the rains created considerable uncertainty on the supply side of the market when the demand side was known to be extremely strong. Although the bad weather delayed harvests of both corn and soybeans, the immediate impact was different because corn entered the crop year with relatively large stocks, while soybean stocks were relatively low. The net result was that world oilseed meal prices started to rise rapidly.

The U.S. weather situation was not the only factor that increased uncertainty and indicated that prices might well rise. Other factors present early in 1973 included: monetary fluctuations, large purchases by the Soviet Union and the People's Republic of China, questionable fishing prospects in Peru, curtailed peanut-meal exports by India and West Africa, transportation bottlenecks in the United States, and an unexpected parallel rise in vegetable oil prices.

Later in the year, a record soybean crop in Brazil which might have eased the pressure on prices was offset by a lower-than-expected fish catch in Peru. Still later, export controls and regulations by the United States, Canada, Brazil, Argentina, and others put even more pressure on prices in world markets.

In addition to the upward pressure on all oilmeal prices, some of the traditional price patterns in international markets were upset. As shown in table 9, European prices for soybean meal, peanut meal, and linseed meal normally move in fairly close harmony with relatively small differential margins. However, the spread between the three was nearly \$300 during the first week of July 1973 (right after the

U.S. export embargo). By the middle of September the three were fairly close together again.

Many of the factors listed above are still present and influencing world markets. Furthermore, feed grain prices have reached record levels in recent months.

Estimated production, trade, and consumption for major areas of the world are contained in table 8. Since for many areas of the world, both crop year and fiscal year trade data for oilseeds and products are unavailable, calendar year data were used. Calendar 1973 trade data are estimates based on presently available incomplete data. Therefore, the 1973 estimate of consumption must be regarded as tentative. Of course, estimates for 1974 are subject to even more uncertainty. Production, consumption, and trade of fishmeal are expressed in terms of soybean meal equivalent. Other oilmeals were not converted to soybean meal equivalent.

Estimates for 1973 and 1974 production have a little better foundation. The estimate of 1973 meal production is simply the meal equivalent of oilseeds harvested in the summer and fall of 1972 and winter and spring of 1973. Copra, palm kernels and fishmeal production—which have a less well defined harvest period—were assumed to be available during the year harvested. Oilmeal production in 1974 is, to the extent available, based on official estimates of oilseed production during the fall 1973 harvest, plus forecasts of the spring 1974 harvest. The production forecasts for spring 1974 are based on historical production, production trends, and governmental policies.

The regional listing in table 8 includes all the major producers, importers and exporters. However, it does not include the whole world, nor does it attempt to include every commodity in every region. For example, the Peruvian estimates include only fishmeal although Peru produces and imports quantities of other oilseeds and meals.

From the "grand total" for 1973 in table 8, it first appears that prices should have been relatively stable throughout the year; total oilmeal production in 1973 was approximately 2.6 million tons above 1972 and consumption jumped nearly the same amount. However, if one looks at the world total with the United States excluded, then a different picture emerges. Even though high prices prevailed throughout the year, imports increased approximately 1.9 million tons for the regions listed. On the other hand, exports from all sources, except the United States, decreased by 1.7 million tons. Therefore, much of the world's regular and increased import needs were met by the United States. That is, importers had to compete with U.S. domestic users for oilseed and fishmeal products. It appears that this was done successfully because U.S. consumption had a very

Table 9---Selected international prices for soybeans, soybean meal, and competing products, annual 1964-72, monthly Dec. 1972-May 1973 and daily prices during June, July and August

Period	Oilseeds										Meals										DM/MT
	Soybeans 1/					Peanut :					Fish :					Soybean					
	U.S.	Brazil	Flaxseed :	Rapeseed :	Peanut :	Linseed :	Decatur :	European :	European :	European :											
	2/	3/	4/	5/	6/	7/	8/	9/	10/												
Annual averages																					
1964	111	187	136	116	108	148	100	78	112	448											
1965	117	206	133	124	119	182	103	77	115	460											
1966	128	187	128	131	111	175	121	90	124	496											
1967	114	182	136	122	111	154	108	87	119	476											
1968	110	171	142	107	104	134	110	85	118	472											
1969	106	208	133	128	117	211	111	82	122	481											
1970	128	232	128	148	131	291	118	86	132	483											
1971	132	258	117	142	116	155	95	86	123	430											
1972	140	259	142	120	144	180	140	99	129	411											
Monthly averages																					
Dec. 1972	174	n.q.	183	n.q.	n.q.	375	190	192	198	633											
Jan. 1973	214	317	208	167	n.q.	422	195	207	215	687											
Feb. 1973	259	341	256	n.q.	n.q.	449	205	241	247	744											
Mar. 1973	258	n.q.	237	185	n.q.	402	189	220	238	673											
Apr. 1973	260	344	n.q.	195	n.q.	417	190	224	256	721											
May 1973	358	365	255	217	291	578	221	347	364	1,016											
Spot prices																					
June 14	11/445	11/435	n.q.	270	n.q.	670	240	430	460	1,192											
June 28	n.q.	n.q.	n.q.	n.q.	n.q.	738	310	413	600	1,471											
July 5	12/522	n.q.	n.q.	n.q.	465	789	342	298	640	1,468											
July 12	n.q.	550	n.q.	336	500	758	359	284	600	1,430											
July 19	n.q.	475	n.q.	379	460	722	340	371	505	1,181											
Aug. 9	n.q.	390	n.q.	345	370	607	280	270	365	873											
Aug. 23	n.q.	12/330	n.q.	314	310	535	260	250	290	718											
Sept. 13	248	244	407	256	240	462	220	180	205	500											
Nov. 8	266	--	431	--	188	594	215	169	205	522											

n.q.-not quoted.

1/ Prices are CIF Rotterdam. 2/ Nigeria shelled CIF U.K. 3/ Can. No. 1, CIF, U.K. 4/ Can. 40% CIF, U.K. 5/ Monthly quotas are 50% protein, any origin CIF Rotterdam. 6/ Peru, 65% CIF Hamburg. 7/ Arg. exp. 37/38% CIF Rotterdam. 8/ 44% protein, bulk, Decatur, crop year rather than calendar year averages. 9/ U.S. 44% CIF Rotterdam. 10/ Rotterdam Price in dollars converted Duetschmarks. 11/ June 7th prices. 12/ Afloat

Source: Oilworld Weekly, The Public Ledger, Grain Market News.

small increase during the year although meal production was up 3.2 million tons.

Areas that had significant increases in supplies in 1973 include Brazil, approximately 800,000 tons, and Argentina, slightly over 200,000 tons. Regions where supplies decreased include: Canada, 450,000 tons mainly due to lower rapeseed production; Peru, fishmeal equivalent to approximately 750,000 tons of soybean meal; and the USSR, approximately 300,000 tons of sunflowerseed meal and 200,000 tons of soybean meal.

Looking at production changes by commodity (table 10), soybeans showed the largest increase in 1973 equivalent to over 3 million tons of meal. The United States accounted for roughly 2 million tons and Brazil 900,000 tons of the increase. Mexico and Argentina had increases of approximately 100,000 tons each. Production of soybeans in the Soviet Union was down significantly due to bad weather in the Far East.

Cottonseed meal showed an 800,000-ton increase, nearly all in the United States. Peanut meal production was down from 1972, due mainly to the Indian drought. West African peanut production was approximately the same as in 1972, which also was a poor year. World rapeseed production was down 300,000 tons, reflecting a 450,000-ton decrease in Canada, a 200,000-ton increase in India, and smaller changes in other regions. The estimating procedure probably understates 1973 linseed meal production because stocks are not considered, and there was a considerable drawdown of linseed stocks during 1973. Copra and palm kernel meal supplies showed a slight decrease for 1973. Production of fishmeal in most of the world was relatively unchanged with the exception of Peru, where production dropped about 750,000 tons (soybean meal equivalent).

As mentioned, 1973's trade and consumption estimates should be viewed as very tentative. However, preliminary indications are that meal consumption showed significant increases in most of the world in 1973. Exceptions include the United States and Canada.

For much of the world, the 1974 production estimate is simply the harvest expected in the fall of 1973. However, there are major problem areas in the supply forecast which could cause major changes. These problems include: (1) Brazilian soybean production 1974: An estimate of 6.0 million tons was used. However, other estimates run as high as 7.0 million tons; and (2) Peruvian fishmeal production

during 1974: A recent fishing survey gave a rather pessimistic report on the status of the parent stocks of anchovies.

Turning to consumption, an increase of 1.1 million tons is forecast for the United States. In addition, there will be a substantial increase in U.S. soybean stocks, which on a meal equivalent basis are expected to total approximately 5 million tons on August 31, the end of the crop year. Most other areas of the world are forecast to have small to moderate increases in consumption. The largest increase, 700,000 tons, is for the EC-9. However, other Western Europe and the People's Republic of China are expected to show larger percentage increases. In both the United States and in other countries, changes in current prices could have a substantial impact on demand.

Forecasts for 1974 meal demand were made on a percentage basis—the percentage increase over 1973 for total protein meal use. The 1974 meal use forecasts are based on past trends in meal use, expected changes in livestock numbers and expected price relationships. Demand for the individual meals was estimated using 1972 and 1973 trade patterns and the production estimate for 1974. The forecasts assume prices will tend to adjust downward throughout the year. Major unknowns concerning the demand side include: (1) reaction of the Western European livestock industry to recent high meal prices, also the adjustment pattern the industry will follow if meal prices should fall to a lower level; and (2) willingness of the Soviet Union and Eastern European countries to import when prices are higher than historical levels. If present prices prevail, the Soviet Union probably will not import either soybeans or meal. Latest reports on anticipated exports (through November 4) indicate that of the 12.7 million tons contracted for export during the crop year, only 30,000 tons of soybeans are contracted for the Soviet Union.

A comparison of estimated production and consumption for 1974 indicates supply is 4 percent larger than demand, which implies prices should tend to moderate throughout the year. In addition, the unknowns mentioned in previous paragraphs indicate the possibility that supply could face even more downward pressure. On the other hand, because of a lack of data, the analysis did not try to estimate stock levels nor how much stock rebuilding can be expected. A major effort to rebuild stocks could cause pressure on available supplies and result in little or no downward price adjustments. (Arthur L. Coffing)

WORLD BEEF PRODUCTION SLOWS

Production of meat leveled off or declined in both the United States and the European Community in 1972 (table 11) and 1973. Demand forces, meanwhile, remained strong and prices soared to record levels.

Both the United States and the European Community increased their imports but not enough to keep their domestic meat consumption from falling.

Table 10--Oilmeal production 1/ by type for selected regions, average 1964-66, 1972, 1973, 1974

Region and year	Soybean	Cotton seed	Peanut	Rapeseed	Linseed	Sunflower seed	Copra & palm kernel	Fishmeal	Total
----- Million metric tons -----									
United States									
1964-66	15.0	2.5	0.1	--	0.5	--	--	0.4	18.6
1972	23.8	1.7	0.2	--	0.2	--	--	0.4	26.0
73	26.0	2.4	0.2	--	0.2	--	--	0.4	29.2
74	31.9	2.1	0.2	--	0.2	--	--	0.4	34.9
Canada									
1964-66	0.1	--	--	0.2	0.3	--	--	0.1	0.8
1972	0.2	--	--	1.1	0.3	--	--	0.1	1.8
73	0.2	--	--	0.7	0.3	--	--	0.1	1.3
74	0.2	--	--	0.7	0.3	--	--	0.1	1.4
EC-9									
1964-66	--	--	--	0.2	--	--	--	0.5	0.7
1972	--	--	--	0.5	--	--	--	0.5	1.0
73	--	--	--	0.6	--	--	--	0.5	1.1
74	--	--	--	0.5	--	--	--	0.5	1.0
O.W.E.									
1964-66	--	0.1	--	0.1	--	--	--	0.8	1.0
1972	--	0.1	--	0.1	--	0.1	--	0.6	1.0
73	--	0.1	--	0.2	--	0.1	--	0.6	1.0
74	--	0.1	--	0.2	--	0.1	--	0.6	1.1
Japan									
1964-66	--	--	--	0.1	--	--	--	0.2	0.3
1972	--	--	--	--	--	--	--	1.0	1.0
73	--	--	--	--	--	--	--	1.0	1.0
74	--	--	--	--	--	--	--	1.0	1.0
Australia									
1964-66	--	--	--	--	--	--	--	--	--
1972	--	--	--	--	--	--	--	--	0.1
73	--	--	--	--	--	--	--	--	0.1
74	0.1	--	--	--	--	0.1	--	--	0.2
South Africa									
1964-66	--	--	0.1	--	--	--	--	0.4	0.5
1972	--	--	0.1	--	--	0.1	--	0.3	0.5
73	--	--	--	--	--	0.1	--	0.3	0.5
74	--	--	0.1	--	--	0.1	--	0.3	0.5
Total Developed									
1964-66	15.2	2.6	0.2	0.5	0.9	0.1	--	2.4	22.1
1972	24.1	1.9	0.2	1.8	0.6	0.2	--	2.6	31.5
73	26.3	2.5	0.2	1.4	0.5	0.2	--	2.6	34.3
74	32.2	2.2	0.3	1.3	0.6	0.3	--	2.7	40.1
East Europe									
1964-66	--	--	--	0.3	0.1	0.5	--	--	0.9
1972	0.1	--	--	0.5	0.1	0.7	--	--	1.5
73	0.2	--	--	0.4	0.1	0.7	--	--	1.5
74	0.2	--	--	0.5	--	0.8	--	--	1.7
U.S.S.R.									
1964-66	0.2	1.4	--	--	0.2	2.1	--	0.3	4.3
1972	0.4	1.8	--	--	0.3	2.4	--	0.7	5.6
73	0.2	1.9	--	--	0.2	2.2	--	0.7	5.2
74	0.4	1.9	--	--	0.3	2.8	--	0.7	6.8
P.R. China									
1964-66	3.8	0.2	0.6	0.5	--	--	--	--	5.2
1972	2.2	0.4	0.5	0.5	--	--	--	--	3.7
73	2.3	0.3	0.5	0.6	--	--	--	--	3.7
74	2.3	0.4	0.5	0.5	--	--	--	--	3.7

Table 10--Oilmeal Continued

Region and year	Soybean:	Cotton:				Sunflower:	Copra &:		
	seed	seed	Peanut:	Rapeseed:	Linseed:	seed	palm	Fishmeal:	Total
							kernel		
Million metric tons									
Total Central Plan	:	:	:	:	:	:	:	:	:
1964-66	: 4.1	1.6	0.6	0.7	0.3	2.4	--	0.4	10.4
1972	: 2.8	2.3	0.5	1.0	0.3	3.2	--	0.7	10.8
73	: 2.7	2.2	0.5	1.0	0.3	2.9	--	0.7	10.3
74	: 2.9	2.4	0.5	1.0	0.3	3.4	--	0.7	11.9
Mexico	:	:	:	:	:	:	:	:	:
1964-66	: --	0.3	--	--	--	--	0.1	--	0.5
1972	: 0.1	0.2	--	--	--	--	--	--	0.5
73	: 0.2	0.2	--	--	--	--	--	--	0.5
74	: 0.3	0.2	--	--	--	--	--	--	0.6
Brazil	:	:	:	:	:	:	:	:	:
1964-66	: 0.3	0.4	0.2	--	--	--	0.1	--	1.0
1972	: 2.2	0.4	0.4	--	--	--	--	--	3.1
73	: 3.1	0.3	0.3	--	--	--	0.1	--	3.9
74	: 4.0	0.4	0.4	--	--	--	0.1	--	4.8
Argentina	:	:	:	:	:	:	:	:	:
1964-66	: --	0.1	0.2	--	0.5	0.4	--	--	1.1
1972	: --	0.1	0.1	--	0.2	0.4	--	--	0.8
73	: 0.2	0.1	0.1	--	0.2	0.4	--	--	1.0
74	: 0.2	0.1	0.1	--	0.2	0.4	--	--	1.0
Peru	:	:	:	:	:	:	:	:	:
1964-66	: --	--	--	--	--	--	--	1.4	1.4
1972	: --	--	--	--	--	--	--	1.3	1.3
73	: --	--	--	--	--	--	--	0.6	0.6
74	: --	--	--	--	--	--	--	1.2	1.2
Other Africa ^{2/}	:	:	:	:	:	:	:	:	:
1964-66	: --	0.1	0.9	--	--	--	0.3	--	1.3
1972	: --	0.2	0.7	--	--	--	0.2	--	1.1
73	: --	0.2	0.7	--	--	--	0.2	--	1.2
74	: --	0.2	0.7	--	--	--	0.2	--	1.2
India	:	:	:	:	:	:	:	:	:
1964-66	: --	0.5	1.5	0.6	0.2	--	0.1	--	2.9
1972	: --	0.5	1.6	0.8	0.2	--	0.3	--	3.5
73	: --	0.7	1.2	1.0	0.2	--	0.3	--	3.5
74	: 0.1	0.6	1.8	1.0	0.2	--	0.3	--	4.1
Other Asia ^{3/}	:	:	:	:	:	:	:	:	:
1964-66	: 0.1	0.2	--	--	--	--	0.8	--	1.2
1972	: 0.1	0.3	--	--	--	0.2	1.4	--	2.0
73	: 0.1	0.3	--	--	--	0.2	1.2	--	1.9
74	: 0.1	0.3	--	--	--	0.2	1.3	--	2.0
Total Less Developed	:	:	:	:	:	:	:	:	:
1964-66	: 0.4	1.6	2.8	0.6	0.7	0.4	1.4	1.5	9.5
1972	: 2.6	1.7	2.8	0.8	0.5	0.6	2.0	1.4	12.4
73	: 3.7	1.9	2.4	1.0	0.5	0.6	1.9	0.6	12.6
74	: 4.7	1.8	3.4	1.0	0.5	0.6	2.0	1.2	14.7
Grand Total	:	:	:	:	:	:	:	:	:
1964-66	: 19.8	5.9	3.7	1.9	1.9	3.1	1.4	4.3	41.9
1972	: 29.4	5.9	3.5	3.7	1.4	4.0	2.0	4.7	54.1
73	: 32.6	6.7	3.1	3.4	1.3	3.8	1.9	4.0	56.8
74	: 39.9	6.4	3.8	3.6	1.4	4.3	2.0	4.7	66.1
Grand Total less U.S.:	:	:	:	:	:	:	:	:	:
1964-66	: 4.7	3.4	3.5	1.9	1.4	3.1	1.4	3.8	23.3
1972	: 6.6	4.1	3.4	3.7	1.1	4.0	2.0	4.3	28.2
73	: 6.6	4.3	2.9	3.4	1.1	3.8	1.9	3.5	27.5
74	: 7.7	4.2	3.6	3.6	1.1	4.5	2.0	4.2	30.7

-- = less than 50,000 tons.

^{1/} Meal production is estimated from seed production using factors for percent crushed and meal extraction. Meal from crops harvested in the first half of the calendar year are assigned to that calendar year. Meals from crops harvested during the second half of the year are assigned to the following calendar year. Copra meal, palm kernel meal and fishmeal were assigned to the year of harvest. ^{2/} Production data was limited to cottonseed in Nigeria and Sudan, peanuts in Nigeria, Senegal and Sudan, palm kernels in Nigeria, Zaire, Sierra Leone. ^{3/} Soybean production in Taiwan, South Korea, and Thailand, cottonseed in Thailand, Israel and Turkey, peanuts in Taiwan and Thailand, copra in Indonesia, Sri Lanka and the Philippines, palm kernels in Malaysia and sunflowerseed in Turkey.

Table 11--Meat production in selected countries, 1968-72

Country	(Calendar Year)				
	1968	1969	1970	1971	1972 <u>1/</u>
	Billion pounds				
Beef and veal <u>2/ 3/</u>					
United States.....	21.6	21.8	22.3	22.5	22.9
USSR.....	11.3	11.4	11.1	11.3	11.5
Belgium-Luxembourg.....	.5	.6	.6	.6	.6
Denmark.....	.5	.4	.4	.4	.4
France.....	3.6	3.4	3.5	3.5	3.2
West Germany.....	2.7	2.8	3.0	3.0	2.6
Ireland.....	.4	.4	.5	.5	.5
Italy.....	1.7	1.8	1.8	1.8	1.8
Netherlands.....	.6	.6	.7	.7	.6
United Kingdom.....	<u>2.0</u>	<u>1.9</u>	<u>2.1</u>	<u>2.1</u>	<u>2.0</u>
EC.....	12.1	12.0	12.5	12.7	11.7
Argentina.....	5.6	6.4	5.8	4.4	4.9
Brazil.....	3.7	4.0	4.1	4.0	4.5
Australia.....	2.0	2.1	2.2	2.3	2.6
Pork <u>4/ 5/</u>					
United States.....	13.1	13.0	13.4	14.8	13.7
Belgium-Luxembourg.....	.8	.8	1.0	1.0	1.1
Denmark.....	1.6	1.5	1.6	1.7	1.7
France.....	2.8	2.6	2.7	3.0	3.1
West Germany.....	4.8	4.8	4.9	5.2	5.2
Ireland.....	.3	.3	.3	.3	.4
Italy.....	1.1	1.1	1.0	1.1	1.2
Netherlands.....	1.3	1.3	1.5	1.7	1.6
United Kingdom.....	<u>1.9</u>	<u>2.0</u>	<u>2.1</u>	<u>2.3</u>	<u>2.2</u>
EC.....	14.5	14.4	15.1	16.4	16.5
USSR.....	6.3	6.3	7.0	8.2	8.7
Japan.....	1.1	1.1	1.4	1.7	1.7
Canada.....	1.2	1.1	1.3	1.5	1.4
Lamb, mutton and goat <u>6/ 7/</u>					
USSR.....	2.2	2.0	2.0	2.1	2.1
Australia.....	1.5	1.5	1.7	1.8	2.1
Turkey.....	.7	.7	.8	.8	.8
United States.....	.6	.6	.6	.6	.5
South Africa, Rep. of.....	.3	.4	.5	.5	.3
France.....	.3	.3	.3	.3	.3
Ireland.....	.1	.1	.1	.1	.1
Italy.....	.1	.1	.1	.1	.1
United Kingdom.....	.5	.5	.5	.5	.5
Other EC.....	<u>.1</u>	<u>.1</u>	<u>.1</u>	<u>.1</u>	<u>.1</u>
EC.....	1.1	1.0	1.0	1.1	1.0
Iran.....	.4	.5	.4	.4	.5

1/ Preliminary. 2/ Carcass weight; excludes offals. Australia: year ending June 30.

3/ These countries account for about 77 percent of world production of beef and veal. 4/ Carcass weight; includes edible pork fat; excludes offals, lard, and inedible greases. 5/ These countries account for about 73 percent of world production of pork. 6/ Carcass weight; excludes offals. Australia: year ending June 30. 7/ These countries account for about 68 percent of world production of lamb, mutton, and goat.

Source: Livestock and Meat Products Division, FAS.

In spite of the higher prices, the traditional suppliers of these markets were unable to increase their exports significantly. World production of meat showed little gain, and even declined on a per capita basis.

Beef herds have been expanding in the major producing areas (table 12). World beef production is expected to resume expansion more in line with population and demand. World pork production should also recover in 1974.

The *United States* is the world's leading meat producer, accounting for a fourth of world beef output and a fifth of all meat production including poultry. But meat imports have been rising steadily for the past decade due to strong demand and favorable prices.

With nearly a sixth of world pork output, the United States ranks third after the People's Republic of China and the European Community which together account for more than two-fifths of world production.

The United States, the world's second largest beef importer (after the EC), generally imports less than 5 percent of the meat it consumes. These imports—mainly beef—are a factor in U.S. prices and production. Similarly, prices and market conditions in the United States echo in the world at large. When the United States is shopping abroad for new supplies, world meat prices generally get a boost. When the United States and the European Community are found to be bidding against each other for reduced world supplies, as happened earlier this year, world prices react strongly.

U.S. beef output for 1973 has been off from levels of recent years, but the cattle herd buildup is progressing at a rapid pace. Prospects indicate that beef production should pick up next year and pork in 1975. Pork output has been down throughout 1972 and 1973.

The *European Community* consumes nearly as much meat as the United States—less beef but more pork. It is the largest meat importing area and the world's second largest producer and consumer. It accounts for 15 percent of global beef consumption and 17 percent of world meat, including poultry, by producing about 90 percent of its needs and importing the rest. When EC domestic beef production slips even a few percentage points—as it did in 1964 and 1965 and again in 1972—world supplies are severely taxed and market prices strengthen.

Most of Europe's beef comes from small, multiproduct dairy farms producing pork as well as beef. The fact that Europe's beef comes principally from dairy cattle has an important bearing on current high beef prices. Europe has a surplus of dairy products. In the surplus situation of the late 1960's, measures were taken to get farmers to trim herds. Not only did this reduce dairy herds, it had at first the deceptive charm of increasing the beef

supply. Eventually, however, beef supplies contracted and imports grew. Controlling dairy surpluses helped bring about the beef shortage of the early 1970's and sent Europe searching for import supplies. Herds are now growing again and greater beef production should follow. However, milk output is also rising and dairy surpluses are growing again. Pork production leveled off in 1972 and is expected to expand in 1973.

The European Community uses, in addition to ordinary ad valorem tariffs, a system of fluctuating tariffs to regulate the flow of imports of meat and other agricultural products. During most of 1972, when domestic supplies were low in Europe and prices high, these so-called variable levies and the ordinary tariffs were suspended on imports of meat. They were reimposed in the fall of 1973, but the variable levies fell to zero again in November. These fluctuations, unusual even under the variable levy system, reflect this year's unusual price and marketing developments.

Australia—the world's largest exporter of beef and mutton—is in the process of expanding beef herds for increased export capability. Herds have been expanding for several years. *New Zealand* is also expanding beef production and generating additional meat supplies. Production of fed beef is beginning in both New Zealand and Australia.

Argentina—second ranking beef exporter—is ripe for expansion after a series of low-production years. Prospects hinge, to some extent, on what the new government will do to promote cattle production and trade. *Brazil*—an occasional strong exporter with a herd twice the size of Argentina's—is trying to develop into a more dependable supplier, but strong domestic demand for meat limits prospects for the short run.

Japan is in the midst of a revolution in meat consumption induced by sustained rapid growth in income and wealth. Per capita meat use doubled during the 1960's, but consumption is still at such a low level that Japan trails the other affluent regions of the world. Beef imports are regulated, but consumption could surge much higher if restrictions were removed.

Eastern Europe is a net exporter of livestock and meat. The past year's large grain imports by the *Soviet Union* apparently indicated a determination to continue their planned emphasis on livestock production to meet a strong and growing consumer demand.

Africa's meat economy is largely self-contained with offsetting internal exports and imports and with some shipments to Europe. Beef production is being stimulated in East Africa, but a 6-year drought in the heart of the South Sahara cattle country has crippled meat producing capacity there. (Donald W. Regier)

Table 12--Livestock numbers in selected countries, 1969-73
(As of January 1)

Country	1969	1970	1971	1972 1/	1973 2/
Million head					
<u>Cattle 3/</u>					
United States.....	110.0	112.4	114.6	117.9	122.0
USSR.....	95.7	95.2	99.2	102.4	104.0
Brazil.....	92.8	95.3	--	--	--
Belgium.....	2.7	2.7	2.7	2.6	2.8
Denmark.....	3.0	2.9	2.8	2.9	2.9
France.....	21.6	21.7	21.7	21.7	21.9
West Germany.....	14.1	14.3	14.0	13.6	13.9
Ireland.....	5.1	5.2	5.4	5.5	5.9
Italy 4/.....	10.1	9.6	8.8	8.7	8.6
Luxembourg.....	.2	.2	.2	.2	.2
Netherlands.....	3.8	4.0	3.9	3.8	4.1
United Kingdom.....	12.1	12.3	12.4	12.9	13.8
EC.....	72.5	72.9	71.9	72.0	74.0
Argentina.....	48.3	48.4	49.8	52.3	--
Mexico.....	23.6	24.9	25.1	26.1	26.8
Australia.....	20.6	22.2	24.4	27.4	29.0
Colombia.....	19.5	20.2	20.5	21.0	21.4
Turkey 4/.....	15.0	14.4	13.9	14.0	14.3
South Africa, Rep. of.....	11.8	10.1	10.0	10.2	--
Canada.....	11.5	11.8	12.2	12.3	12.7
<u>Hogs 5/</u>					
Brazil.....	64.9	65.9	--	--	--
USSR.....	49.0	56.1	67.5	71.4	66.5
United States.....	60.8	57.0	67.4	62.5	61.5
Belgium.....	2.5	3.1	3.8	3.9	4.3
Denmark.....	7.8	8.4	8.7	8.8	8.8
France.....	9.6	10.5	11.6	11.4	11.5
West Germany.....	18.7	19.3	21.0	20.0	20.0
Ireland.....	1.1	1.1	1.2	1.1	1.0
Italy.....	7.3	9.2	9.0	8.2	8.0
Luxembourg.....	.1	.1	.1	.1	.1
Netherlands.....	4.8	5.5	6.2	6.1	6.4
United Kingdom.....	8.0	8.1	8.5	8.9	8.9
EC.....	59.8	65.2	70.1	68.5	69.0
Philippines.....	12.0	12.0	12.5	13.5	13.0
Mexico.....	10.0	10.3	11.7	11.7	9.4
Canada.....	5.7	6.5	7.7	7.4	7.3
<u>Sheep 6/</u>					
Australia.....	174.6	180.1	177.8	162.9	142.3
USSR.....	140.6	130.7	138.1	139.9	139.0
New Zealand.....	59.9	60.3	58.9	59.9	60.5
South Africa, Rep. of.....	40.4	34.1	31.6	31.3	--
Iran.....	34.0	32.0	32.0	32.0	--
Brazil.....	24.6	24.4	24.5	26.5	27.0
Belgium.....	.1	.1	.1	.1	.1
Denmark.....	.1	.1	.1	.1	.1
France.....	9.8	10.0	10.2	10.1	10.2
West Germany.....	.8	.8	.8	.8	.9
Ireland.....	2.9	2.8	2.8	2.9	2.8
Italy.....	8.2	8.1	7.9	7.8	7.8
Luxembourg.....	--	--	--	--	--
Netherlands.....	.6	.6	.6	.6	.6
United Kingdom.....	19.7	19.2	18.5	18.7	19.6
EC.....	42.1	41.7	41.1	41.1	42.1
United States.....	21.4	20.4	19.7	18.7	17.7

1/ Preliminary. 2/ Forecast. 3/ These countries account for about 42 percent of world cattle numbers. 4/ Includes buffalo. 5/ These countries account for about 45 percent of world hog numbers. 6/ These countries account for about 44 percent of world sheep numbers.

Source: Livestock and Meat Products Division, FAS.

DAIRY PRODUCTION IN MAJOR COUNTRIES REMAINS STABLE

Total milk production in 1973 in major dairy countries is estimated to be about the same as in 1972 (table 13). A decline in production of more than a million tons in the United States was offset by a million-ton increase in the European Community (EC-9). Some further small decline in U.S. output is expected in 1974. However, expected increases in milk output in other major producing countries will more than offset the decline. World export availabilities from major producing countries should be sufficient to meet demand in traditional markets even if the United States continues to import in 1974 at the higher 1973 levels.

The decline in *United States* milk production in 1973 is due primarily to two factors. First, a sharp rise in feed prices led to reduced feeding rates and lower milk output per cow. Second, high slaughter cow prices quickened the pace of milk cow slaughter through heavy culling of dairy herds.

Despite the decline in U.S. production, total dairy product consumption remained at a high level in 1973 due to a sharp rise in imports. Dairy imports in January-September were equivalent to 1.3 billion pounds of milk, one-fourth higher than during the 1972 period. Increases were mainly in nonfat dry milk and cheese.

In addition to the annual import quota of 1.8 million pounds of nonfat dry milk, emergency procedures were used to authorize additional imports of 265 million pounds. The cheese import quota was also temporarily increased 50 percent (about 64 million pounds), with entry into the United States required by July 31. An estimated three-fourths of this amount was actually imported.

More recently—November 1—emergency procedures were used to authorize additional imports of 56 million pounds of butter and 22.6 million pounds of butter oil, all to be entered by December 31. Regular annual import quotas total 707,000 pounds of butter and 1.8 million pounds of butter oil.

An increase in the minimum price support level for manufacturing milk in the United States, authorized under the Agriculture and Consumer Protection Act of 1973, and moderating feed prices will tend to ease the rate of decline in milk output in the United States. However, some further small decline in output is expected in 1974 as increased yields only partly offset the decline in milk cow numbers.

Milk production in *New Zealand*, the world's major dairy exporter, failed to show any increase in 1973. Milk cow numbers were up slightly, but a drop in output in the first quarter of 1973—due to a drought-reduced feed supply—dampened production levels for the year. New Zealand continues to diversify dairy product markets, lowering its reliance on its major market, the United Kingdom. Butter is still New

Zealand's largest single export item, but there is steady growth in exports of other dairy products. Exports of butter declined in 1973, while nonfat dry milk showed a significant increase. Export availability of dairy products is expected to increase in 1974.

Australia's milk production is also estimated to be virtually unchanged from 1972 at 7.3 million metric tons. Exports of dairy products were maintained at relatively high levels in 1973. However, butter shipments were down slightly. The Australian Dairy Board reduced export prices in terms of Australian dollars to the full extent of the December 1972 revaluation to remain competitive in world markets. Similar adjustments were not needed after the 1973 revaluation because of the strong world demand situation. Milk production and export availability of dairy products is expected to increase in 1974.

Dairy herd numbers and milk deliveries to processing plants continued to expand in the *European Community* in 1973. However, the rate of increase in milk deliveries was not as rapid as in 1972, due to a relatively dry summer. Milk production in most other West European countries will show little if any increase in 1973.

Butter stocks in the EC-9 were estimated at 435,000 tons on August 31, 1973, nearly 20,000 tons below a year earlier. The April 1973 sale of 200,000 tons of butter to the USSR, at a price only about a fifth of the European Community support price, was a major factor in keeping stocks at this level. Other factors acting to hold down EC stock levels are increased butter consumption within the EC, and a larger export market because of some decline in export availability by New Zealand and Australia, and a drop in butter production in Canada and the United States. Although these events indicate the butter market has improved, market equilibrium is still a long way off in the EC.

The EC's introduction of a milk-to-beef conversion premium has apparently not significantly altered development in the dairy sector. Other changes in the EC in April 1973—reducing the intervention price for butter by 5.4 percent, raising the intervention price for nonfat dry milk by 22 percent, and authorizing national subsidies in the sale of butter—may be having some impact. There has been a large rise in nonfat dry milk stocks (government held) due to a higher intervention price.

Milk production in the EC will probably continue to expand in 1974, but a price-cost squeeze may tend to brake expansion in herd numbers. Also, EC Commission proposals to modify the Community's dairy policies (see p. 7), could affect milk production. (Anthony S. Rojko)

Table 13.--Milk production in selected countries, 1968-73
(calendar year)

Country	1968	1969	1970	1971	1972 <u>1/</u>	1973 <u>2/</u>
----- Million metric tons -----						
France	28.0	27.7	27.2	27.6	28.2	28.5
West Germany . .	22.1	22.2	21.9	21.5	22.0	22.1
Italy	9.4	9.1	8.9	9.1	9.1	9.2
Netherlands . .	7.7	8.0	8.2	8.4	9.0	9.2
Belgium	4.2	4.1	4.0	4.0	4.3	4.2
United Kingdom .	12.0	12.1	12.4	12.7	13.2	13.4
Denmark	5.1	4.9	4.6	4.6	4.6	4.7
Ireland	3.7	3.7	3.7	3.7	3.8	3.9
EC <u>3/</u>	92.2	91.8	90.9	91.6	94.2	95.2
Spain	3.3	3.5	3.6	3.5	3.5	3.6
Austria	3.3	3.3	3.3	3.3	3.3	3.3
Finland	3.5	3.5	3.3	3.2	3.3	3.3
Switzerland . .	3.3	3.2	3.1	3.2	3.2	3.2
Sweden	3.3	3.2	2.9	2.9	2.9	2.9
Norway	1.8	1.8	1.7	1.7	1.8	1.8
Total	18.5	18.5	17.9	17.8	18.0	18.1
Japan	4.0	4.5	4.8	4.8	5.0	5.2
New Zealand . .	6.3	6.4	6.0	6.0	6.2	6.2
Australia . . .	7.2	7.8	7.5	7.3	7.2	7.3
United States .	53.2	52.8	53.3	53.8	54.6	53.5
Canada	8.3	8.5	8.3	8.1	8.1	8.2
Grand total .	189.7	190.3	188.7	189.4	193.3	193.7

1/ Preliminary.

2/ Estimated.

3/ Excludes Luxembourg.

Source: Dairy and Poultry Division, FAS.

COTTON DEMAND IS STRONG

World cotton production is expected to increase by approximately 600,000 bales to 60 million bales (table 14)⁸ in 1973/74 (August-July), more than enough to cover anticipated demand of 58.2 million bales. World cotton trade increased by 2.4 million bales to a record 20.7 million bales in 1972/73, with the United States supplying four-fifths of the increment in exports. Trade in the current marketing year is expected to remain near last year's level. World cotton stocks increased somewhat over the past 2 years, but at 23.5 million bales on last August 1, they remained low relative to growing consumption levels. Cotton prices in international markets doubled between February and September, 1973, but by October had begun to level out.

Cotton production in the United States fell about 500,000 bales in 1973. Production in other important exporting countries also fell, notably in Pakistan where cotton was damaged by floods, and in Mexico and Turkey where acreages declined. However, increased production in several other countries, including the People's Republic of China, the USSR, India, and Central America, more than compensated for declines elsewhere.

The large increase in world cotton trade in 1972/73 was due to a poor crop in China—which imported at least 1.6 million bales, a million more than in the previous year—and to stock building in Western Europe and Japan where imports were up by 600,000 bales and 320,000 bales, respectively. Imports were also up substantially in Hong Kong. Although the United States supplied the bulk of increased exports in 1972/73, the Soviet Union and Turkey also expanded exports greatly. About two-thirds of the increment in U.S. exports went to the People's Republic of China, Japan, and the European

Community. Other growth markets were Hong Kong, South Korea, and Bangladesh (table 15).

Total U.S. cotton exports in 1973/74 are expected to reach 6 million bales, the highest level since 1960/61. Central America and several smaller exporters will also have increased export availabilities. Exports from Pakistan, Mexico, Turkey, and Sudan are expected to be down.

World mill consumption of cotton rose at a relatively rapid rate over the past 2 years and is expected to rise by an even greater amount in 1973/74 (table 14). Mill consumption has been increasing at a moderate rate in Western Europe, Japan, and the Communist Countries, but has increased much more spectacularly in the developing countries. Developed North America is the only major region where mill consumption of cotton is declining. The consumption decline in India in 1972/73 was due to power shortages and is expected to be reversed this year. The inclination of cotton producing countries in the developing world to process a larger proportion of their cotton into textiles, and of developed countries to import an increasing proportion of their cotton requirements in the form of processed textiles has tended to accentuate the shift of cotton textile production toward the developing countries. This trend has apparently accelerated in the past 2 years.

As of November 1973, world prices of cotton remained at levels more than double those prevailing during 1972. The high prices reflect a bullish demand situation apparently related to a booming consumer demand for textile products, tight supplies, and rapidly increasing prices for man-made fibers (an unusual situation), stock building activities by some of the major importing countries, and the relatively small increase in cotton fiber production forecast for 1973/74. Worldwide inflation and realignment of world currencies are also important factors behind the high prices. The current petroleum shortage should place continued stress upon man-made fiber supplies. (Edmond Missiaen)

⁸Unless otherwise noted, bales are 480 pounds or 217.726 kilograms net weight.

WORLD FERTILIZER SUPPLIES TIGHT

The world situation for nitrogeous and phosphate fertilizers this year is tight. Since mid-1971, prices have risen substantially, 100 percent or more for some products. The fertilizer market will be tight for 1974. Supplies should show some improvement by 1975. During the next 2 years, maintenance of adequate supplies will depend on maintaining high utilization of existing plant capacity in the developed countries and raising utilization rates in the developing countries. Global shortages of basic raw materials are not imminent

although some shortages of raw materials in some countries may necessitate significant adjustments in prices, technology, and location.

The quantitative effects of the current fertilizer shortage on world and U.S. food production are not clear. In many countries like the United States, heavy fertilization is key to high yields in crops like wheat, rice, and corn. Such crops figure strongly in both domestic food supplies and world agriculture. Soybeans, a growing source of world protein supplies, however, are a legume and currently receive little

Table 14. Cotton production, exports, imports, and mill consumption in selected countries and regions, 1971, 1972, and 1973 1/

Country or Region	Production			Exports			Imports			Mill Consumption		
	1971	1972	1973	1971	1972	1973	1971	1972	1973	1971	1972	1973
	Prelim.	Prelim.	Fore-	Prelim.	Prelim.	Fore-	Prelim.	Prelim.	Fore-	Prelim.	Prelim.	Fore-
			cast			cast						cast
						2/-						
United States	10.48	13.70	13.19	3.38	5.30	6.00	.07	.03	.04	8.18	7.77	7.40
USSR	11.10	11.20	11.80	2.60	3.00	3.00	.70	.70	.70	8.80	8.90	9.20
China, Peoples' Rep.	7.60	6.50	7.00	--	--	--	.60	1.60	1.20	8.00	8.20	8.20
India	5.90	5.15	5.40	.22	.19	.18	.60	.38	.30	5.50	5.40	5.70
Pakistan	3.25	3.23	3.00	1.01	.82	.60	--	--	--	2.00	2.25	2.40
Brazil	3.10	2.95	2.90	1.50	1.40	1.40	--	--	--	1.38	1.50	1.60
Egypt	2.34	2.40	2.40	1.40	1.45	1.40	--	--	--	.92	.98	1.00
Turkey	2.40	2.50	2.30	1.17	1.43	1.30	--	--	--	.88	.94	.99
Mexico	1.71	1.79	1.55	1.00	.95	.75	--	--	--	.71	.79	.82
Central America 3/	1.20	1.24	1.44	.97	1.10	1.28	.01	.02	.02	.14	.14	.17
Sudan	1.10	.90	1.10	.99	1.00	.85	--	--	--	.09	.08	.08
EC-9	--	--	--	.06	.09	.10	4.20	4.59	4.50	4.24	4.23	4.25
Japan	--	--	--	--	--	--	3.56	3.88	3.90	3.37	3.46	3.50
Eastern Europe 4/	.11	.10	.10	--	--	--	3.11	3.18	3.33	3.35	3.26	3.43
Other Western Europe 5/	.71	.86	.87	.34	.30	.30	1.37	1.58	1.60	1.73	1.83	1.96
Hong Kong	--	--	--	--	--	--	.60	.80	.80	.72	.70	.70
Taiwan	--	--	--	--	--	--	.58	.66	.75	.66	.65	.70
Korea, Rep. of	.02	.02	.02	--	--	--	.52	.58	.65	.55	.58	.68
Other Countries	6.18	6.88	6.94	3.67	3.66	3.90	2.45	2.31	2.71	4.61	5.06	6.12
Total	57.20	59.42	60.01	18.31	20.69	21.06	18.37	20.31	20.50	55.83	56.72	58.20

-- = less than 500 bales.

1/ Years beginning August 1.

2/ Bales of 480 lbs. net weight, multiply by 0.218 to obtain millions of metric tons.

3/ Guatemala, El Salvador, Honduras, Nicaragua, and Costa Rica.

4/ East Germany, Poland, Czechoslovakia, Hungary, Romania, Bulgaria, Yugoslavia, and Albania.

5/ Total Europe less USSR, Eastern Europe, and EC-9.

Source: FAS

Table 15. U.S. cotton exports by destination, 1969-72 1/

Country	:	1969	:	1970	:	1971	:	1972
	:		:		:		:	
	:	<u>- - - -1,000 running bales</u>						<u>2/- - - -</u>
	:		:		:		:	
Japan	:	623		841		726		1,039
Germany, West	:	26		65		77		177
Italy	:	46		57		121		172
France	:	30		60		35		141
United Kingdom	:	38		95		63		88
Other EC	:	40		86		79		122
Total European Community	:	(180)		(363)		(375)		(700)
	:		:		:		:	
Korea, Rep. of	:	455		491		489		572
China, Peoples' Rep.	:	--		--		--		534
Taiwan	:	193		406		288		356
Canada	:	181		292		312		249
Indonesia	:	242		193		227		203
Hong Kong	:	61		193		48		193
Philippines	:	146		137		127		153
South Vietnam	:	99		112		109		124
Bangladesh	:	--		--		--		114
Spain	:	4		19		38		107
Switzerland	:	15		33		32		86
Romania	:	46		57		44		72
Poland	:	51		--		38		58
India	:	261		210		101		--
Others	:	211		390		275		440
	:		:		:		:	
Total	:	2,768		3,737		3,229		5,000

-- = less than 500 bales

1/ Years beginning August 1.

2/ Export bales were, on the average, packed heavier than 480 lbs. net, so the total number of bales shown here does not agree with the net weight bales shown in table 14.

Source: FAS

nitrogen, although they do respond to other nutrients.

In addition, the effect of all farmers marginally reducing fertilizer use may not be very great. The effect of some farmers losing most or all of their fertilizer supply, however, could be devastating to them.

Many countries have imported large amounts of fertilizer during 1973 in an effort to regain some of the crop production lost in 1972 as a result of widespread droughts. At the same time, world demand and prices for agricultural products have reached record levels, motivating a strong demand for fertilizers. As a result, fertilizer inventories have been drawn down, causing international fertilizer prices for many products to reach record levels. Japan, the largest exporter of nitrogenous fertilizers, is sold out of urea, its principal fertilizer export. Kuwait, an important new producer and exporter of urea, has sold all its available supplies this year to the People's Republic of China (PRC).

PRC and India together account for roughly 30 percent of world nitrogen imports. PRC, the world's largest importer of nitrogen, takes about 80 percent of the Japanese urea exports, compared to 30 percent a few years ago. India, another major importer of nitrogen, imports about 40 percent of its fertilizer requirements. Both countries are building up their domestic fertilizer capacity substantially, but will have to depend heavily on imports for the next few years.

On the U.S. side, the tight fertilizer situation has reportedly caused spot shortages for autumn sowing even with utilization of plant capacity approaching 95 percent for some products. Current estimates indicate a possible shortage in 1974/75 of 1.0 million tons of nitrogen and 0.7 million tons of phosphate. These estimates were made before the domestic price freeze on fertilizer was lifted. These shortage estimates could be reduced with reduced exports. The large inventories of late 1972 caused many large U.S. fertilizer producers to actively seek additional international markets. Higher domestic prices should dampen this export incentive.

The present world fertilizer shortage has been building up since mid-1971. The over capacity of the late 1960's discouraged new investment in nitrogen fertilizer plants. Furthermore, in many of the plants that were begun, construction delays have postponed startup dates, and operating difficulties have plagued many newly completed plants. Construction and operating difficulties have been most severe in the developing countries where much of the new capacity, particularly for urea, is concentrated. Utilization of capacity in these countries currently averages only about 50 to 60 percent. As these problems are solved, fertilizer supplies should improve somewhat. However, even if capacity utilization rates remain near or above 90 percent in

developed countries and increase to roughly 70 percent in the developing countries, supply and demand will be equated at higher prices in the short run.

Augmenting present problems is the growing shortage of the principal component of most nitrogenous fertilizers, natural gas, particularly in the United States, which is the largest producer and consumer of nitrogen fertilizer. For phosphates, the high inventories of phosphate rock during the late 1960's reduced incentives for investment in phosphate mining. Current plans, however, indicate a substantial increase in phosphate capacity by 1974. Improvement in U.S. phosphate fertilizer supplies can be expected in the next 2 years as U.S. producers increase their capacity by one-third. World supplies, however, may remain tight, particularly if planned starting dates are delayed. TVA estimates indicate that meeting projected 1980 phosphate demand will require an operating rate of nearly 90 percent of capacity for phosphate mining plants, on a world wide basis.

With production and investment stabilized by the Canadian producers association, potash supplies do not appear limited in the foreseeable future. Available capacity is well above estimated short-term needs, and raw materials are not limiting major producing centers. A railway strike this summer did, however, cripple shipments from Canada, the world's second largest producer and principal supplier of the United States.

For the longer run, the present tight supply and high price situation will undoubtedly result in more investment in nitrogenous and phosphatic fertilizers. These investments, however, may follow a different pattern than in the past, as the developing regions increase their consumption and the more developed areas exhaust their most easily exploitable natural gas supplies. Already several middle eastern countries are building nitrogen plants based on their vast natural gas reserves. According to recent reports Kuwait has become the fourth or fifth largest exporter of urea. Morocco has replaced the U.S. as the largest exporter of phosphate rock, based on the vast rock deposits of North Africa. Depending on the economic and political situation, however, changes in technology could alter this emerging pattern. North America still has substantial reserves of "sour" natural gas, although processing it is more expensive than "sweet" gas. Natural gas is not the only source of hydrogen to make ammonia, currently the basic constituent of nitrogenous fertilizers. Naptha is already used in some countries. Fuel oil and synthetic natural gas made from coal could also become economical substitutes for natural gas.

In summary, the tight international market for nitrogen will likely last into 1975. Utilization of plants will probably be high as suppliers attempt to meet demand with their essentially fixed capacity in

the short run. As the plants currently suffering from delays or low operating rates solve their problems, the shortage should ease somewhat. Depending on the severity of the natural gas shortage, U.S. nitrogen producers may not be able to raise domestic production significantly. U.S. nitrogen production costs likely will increase as the cost of natural gas rises, though not proportionally. For phosphates, the current U.S. supply shortages can be expected to improve over the next 2 years as price rises encourage investments in mining phosphate rock. For both nitrogen and phosphate, the recent lifting of U.S. domestic price controls on fertilizers will likely reduce the U.S. contribution to international fertilizer supplies as domestic prices rise and exports decline from recent rates.

The current short-term shortage cannot be greatly altered by building new plants because of the lead time required for their construction. It thus becomes increasingly important to utilize existing capacity and resources with maximum efficiency. Plant operating rates will likely approach rated capacity and in some cases may exceed it. Marketing and distribution will be critical for both developed and developing countries.

In the long run, global resources of raw materials do not seem limiting. Substantial changes in technology, prices, and location of production and export centers may occur, however, as less developed regions develop their relatively unexploited resources. (Richard B. Reidinger)

WORLD FOOD SITUATION—TRENDS AND PROSPECTS

Trends in Food Production

The world's food production has grown steadily over the past two decades.⁹ Growth in the developed countries has roughly paralleled that in the less developed countries. The compound annual rates of growth were 2.7 percent and 3.0 percent, respectively. In the developed countries there were three occasions (1961, 1969, and 1972) in which food production fell below the previous year. Only in 1972 did production decline in the LDC's (see figure A). Both regions recovered in 1973 with preliminary estimates showing an increase of about 6 percent in each.

Population grew more rapidly in the less developed countries than in the developed countries over the last two decades. While population continues to grow in the developed countries, both the rate of increase and the annual increment in numbers are low and steadily declining. Growth fell below 1 percent in 1966, and it has diminished further since then. In the LDC's, however, the rate of population increase and the annual increment are high, with little decline in the rate of increase. Growth now exceeds 2.5 percent per year, and the present annual increment of 45 million, nearly double the level of the early 1950's, is 5 times the current increment of the developed countries. The LDC's now account for 83 percent of the world's population increase as compared to 68 percent only a score of years earlier. Because of these trends the share of the developed countries in total population has dropped to 38 percent from 44 percent in 1954.

As a consequence of differential rates of population growth, the peoples of the developed and less developed country groups have not fared equally well from the roughly equal growth in food production. In

the developed countries production increased much faster than population, providing for a substantial gain in production per capita. In the LDC's population gains absorbed nearly all of the production increase; production per capita improved only slightly (see table 16).

Food production per capita in the developed countries rose at a compound annual rate of 1.5 percent. Each of the several regions showed a strong uptrend, with the index of food production per capita (1961-65=100) in each case reaching or exceeding 110 at least 3 times in the last 20 years (see figure B). The steepest trends are shown in Eastern Europe and the USSR. Least growth was in the United States where production was restricted by policy. Wide fluctuations in several regions (the USSR, Canada, and Oceania) reflected the effects of weather but did obscure the upward trends.

Food production per capita in the LDC's trended upward only 0.4 percent per year, and in none of the regions did the index go as high as 110. Indeed, in Africa the index failed to reach even 105 and a general downtrend persisted after 1961, with slight upturns only in 1969 and 1971. It must be recognized, however, that many of the estimates of population and food production in African countries may not be as reliable as those in most other regions because of insufficient data.

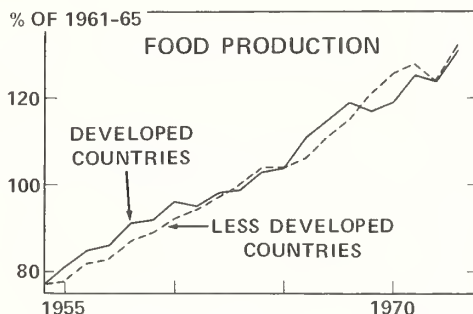
Figure C contrasts the total value of food production in the developed regions versus that in the less developed regions, showing the change over a 20 year period. The much higher total value of food production in the developed regions reflects the consumption of higher value commodities such as livestock products.

For the world as a whole, however, cereals continue to play a dominant role, both for direct consumption

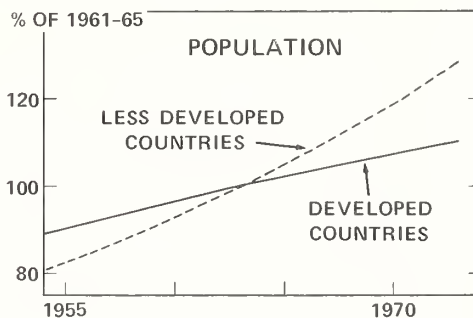
⁹ The world excluding Communist Asia.

FOOD PRODUCTION AND POPULATION DEVELOPED AND LESS DEVELOPED COUNTRIES

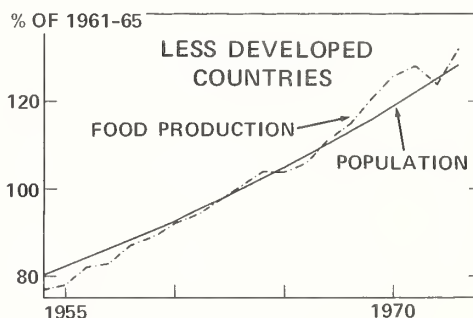
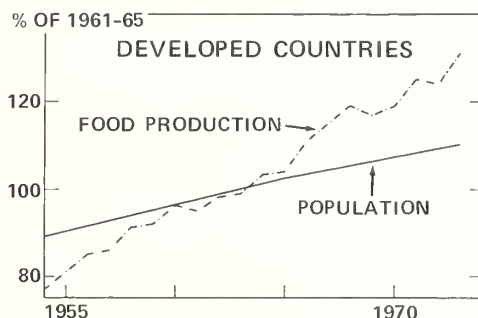
Food production has grown steadily over the past two decades. Growth in the developed countries has roughly paralleled that in the less developed countries.



Population has grown faster in the less developed countries.



Peoples of the developed and less developed country groups have not fared equally from the roughly equal growth in food production. In the developed countries production has increased much faster than population, boosting production per capita. In the LDC's population gains have absorbed nearly all of the production increase; production per capita has improved only slightly.



POPULATION EXCLUDES COMMUNIST ASIA

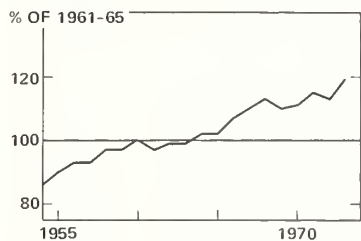
FIGURE A

Table 16.--Indices of world population and food production, 1954-73 1/

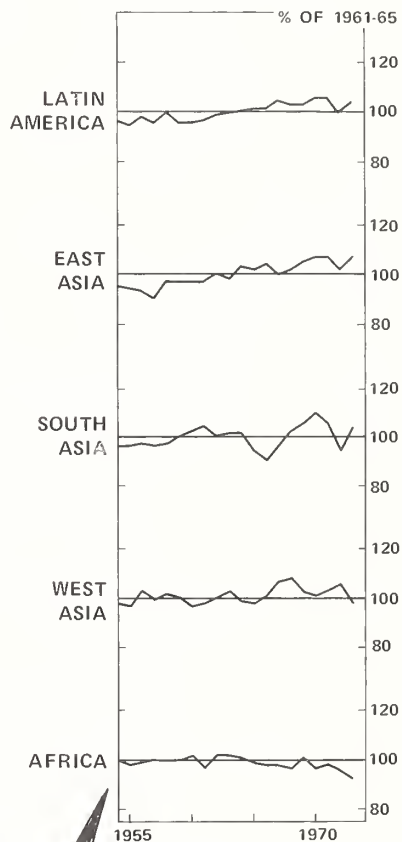
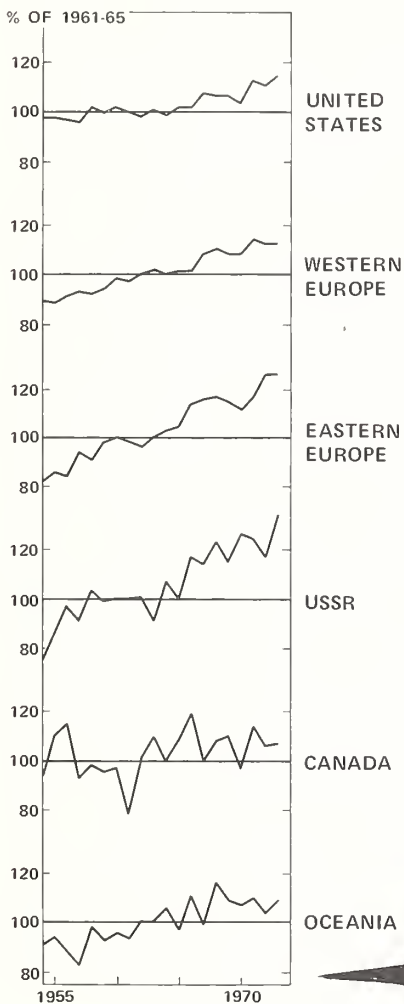
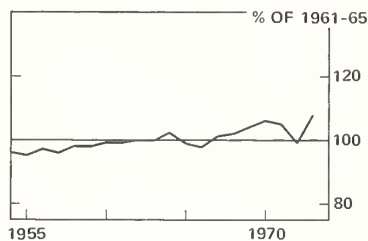
Calendar Year	World		Developed countries		Less developed countries					
	Population	Food Production	Population	Food Production	Population	Food Production				
	:Total:	Per capita:	:Total:	Per capita:	:Total:	Per capita:				
	-----		1961-65=100		-----					
1954	84.2	77	91	89.1	77	86	80.6	77	96	
1955	85.7	80	93	90.3	81	90	82.5	78	95	
1956	87.3	84	96	91.5	85	93	84.4	82	97	
1957	89.0	85	96	92.7	86	93	86.3	83	96	
1958	90.7	90	99	93.9	91	97	88.4	87	98	
1959	92.4	91	98	95.1	92	97	90.5	89	98	
1960	94.2	94	100	96.3	96	100	92.8	92	99	
1961	96.1	95	99	97.5	95	97	95.1	94	99	
1962	98.0	98	100	98.9	98	99	97.5	97	100	
1963	100.0	100	100	100.1	99	99	99.9	100	100	
1964	101.9	103	101	101.2	103	102	102.4	104	102	
1965	103.9	104	100	102.3	104	102	105.0	104	99	
1966	105.9	109	103	103.4	111	107	107.7	106	98	
1967	107.9	114	106	104.3	115	110	110.4	111	101	
1968	109.9	118	107	105.3	119	113	113.2	115	102	
1969	112.0	118	105	106.3	117	110	116.1	121	104	
1970	114.2	121	106	107.3	119	111	119.0	126	106	
1971	116.4	126	108	108.3	125	115	122.1	128	105	
1972	118.7	124	104	109.3	124	113	125.3	124	99	
1973	120.9	131	108	110.2	131	119	128.5	132	103	
1/	World excluding communist Asia.									

FOOD PRODUCTION PER CAPITA

DEVELOPED COUNTRIES



LESS DEVELOPED COUNTRIES

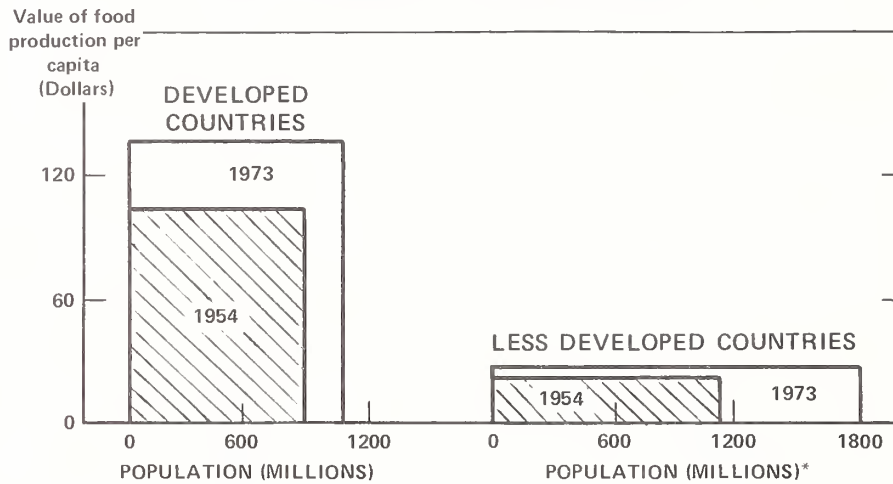


The LDC's have gained only 0.4 percent per year. In none of the regions has the index reached 110, and Africa has shown a downtrend since 1961.

Food production per capita has trended upward 1.5 percent per year in the developed countries. In each of the regions the index of food production per capita has reached or exceeded 110 at least 3 times in the 20 years.

FIGURE B

POPULATION AND FOOD PRODUCTION



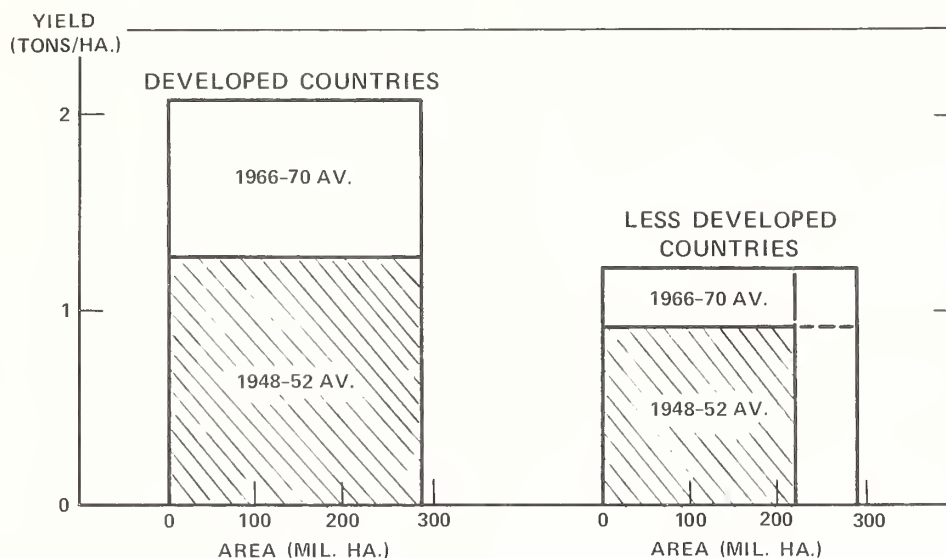
*Population excludes Communist Asia

In this chart the area of each rectangle, determined as the product of population (measured on the horizontal axis) times value of food production per capita (in dollars on the vertical axis), represents the total value of food production in million dollars for an indicated group of countries at a specified time. All four rectangles may be compared in height, in width, and in area. (Values computed at 1961-65 average prices.)

1. Developed countries in 1973 accounted for:
 - a. Two-fifths of world population
 - b. Three-fourths of world food production
 - c. Three-fourths of the increase in world food production since 1954
 - d. One-fourth of the increase in world population since 1954
2. From 1954 to 1973, the developed countries:
 - a. Increased population one-fourth, reaching 1,100 million, about equal to population in the LDC's in 1954, whose populations increased 60 percent by 1973.
 - b. Increased food production per capita one-third, reaching \$139 per person, more than 5 times the level of the LDC's.
 - c. Increased total food production two-thirds, to \$150 billion, more than 3 times that of the LDC's.
3. In the LDC's:
 - a. Food production per capita increased only 5 percent.
 - b. Aggregate food production rose two-thirds by 1973, to total little more than half that of the DC's 20 years earlier.

FIGURE C

ALL GRAINS: AREA, YIELD, AND PRODUCTION



In this chart the area of each rectangle, determined as the product of the amount of land in grains (in million hectares or the horizontal axis) times yield per hectare (in kilograms on the vertical scale), represents the total production of grains in million tons for an indicated group of countries at a specified time. All four rectangles may be compared in height, in width, and in area.

1. Developed countries in 1966-70 accounted for:
 - a. 50 percent of area in grains
 - b. 65 percent of world grain production
 - c. 61 percent of the increase in grain production over the 1948-52 average
 - d. None of the increase in world grain area
2. From 1948-52 to 1966-70 the LDC's:
 - a. Increased grain area 35 percent, reaching nearly 300 million hectares, thereby catching up with area in developed countries, which made no gain over this period.
 - b. Increased grain yields 32 percent, to 1.2 tons per hectare, nearly equal to developed countries' 1948-52 yields which increased 63 percent by 1966-70.
 - c. Increased grain production 78 percent to 356 million tons, nearly equal to the developed countries' 1948-52 production, which increased 64 percent by 1966-70.

The increase in production in the LDC's was 156 million tons:

- 45 percent from increased area
- 41 percent from increased yields
- 14 percent from combined effect of increased area and yields.

FIGURE D

as a food and also as a feed for expanding livestock economies. Figure D shows the great difference in total grain production in the developed versus the less developed regions, comparing the two periods 1948-52 and 1966-70. In the latter period the developed countries accounted for almost two-thirds of world grain production on an area slightly less than that in the less developed regions. (Riley H. Kirby)

Food Consumption

Despite the high prices and temporary shortages of the past year the fundamental conditions of the world food economy have changed very little. Patterns of food consumption are largely determined by habits, tastes, and taboos which alter little from year to year, and patterns of production are likewise remarkably stable. Consumers in rich countries eat better than those in poor ones largely because the economically developed countries produce more per person than the less developed ones.

Table 17 shows the number of calories per person per day from 11 food groups, as given in the Food and Agriculture Organization (FAO) food balances for 1964-66. Changes in diets have occurred since then but no equally comprehensive statistics have been published for more recent years. The countries of the world have been grouped into 20 regions corresponding to those used in ERS projections of grain production and consumption.

The developed regions average noticeably higher than the less developed with respect to total calories and calories from sugar, vegetables, fruits, fats, and animal products. In the less developed regions consumption per capita is high for cereals, starchy root crops and plantains, and the pulses-and-nuts group of foods.

Because Japan is moving rapidly toward a diet more typical of the rich countries than the traditional Japanese diet, the 1964-66 figures are less representative of current conditions than such figures are for most other countries. The food balance for the Japanese fiscal year ending March 1972 showed total calories at 2,477, up 61 from 1964-66. Major gains were made by sugar (84), fats (65), meat (33), eggs (25), and milk (20), while cereals contributed 176 fewer calories directly. The latest estimate by the Foreign Agricultural Service indicates meat consumption per capita in Japan in 1972 was 31 pounds, twice the level of 1965.

Since 1964-66 every country in Western Europe has reported to FAO a decrease in calories per person per day derived directly from grain. Except in Southern Europe all countries have also reported a drop in calories from potatoes. On the other hand, nearly all have consumed more eggs per capita and, except for two slight declines (Denmark and U.K.), all have increased consumption of meat per capita. The Southern countries—Greece, Italy, Portugal, and

Spain—have increased consumption of milk and cheese since 1964-66, but elsewhere in Europe changes in milk consumption have been mixed.

The importance of cereals in food consumption is indicated partly by the fact that, for the world as a whole, they supply a trifle more than half of the calories and partly by their role as feedstuffs in the production of meat, milk, and eggs. Meat consumption is increasing in all countries with trade policies and incomes that permit it. The rising affluence of upper-income consumers around the world is pulling meat into their kitchens, from either domestic production or imports or both. To meet this rising demand for meat—including poultry—producers must use rising quantities of concentrated feed; there is not enough grassland and roughage. The concentrated feed includes protein-rich commodities like oilcake and fishmeal but is predominantly grain. The detailed FAO data for the 1964-66 period show that per capita use of grain for food is approximately equal in the developed and less developed regions; the relatively high use of grain for food in the USSR and Eastern Europe raises the average for the developed region. In the developed countries the per capita use of cereals for feed far exceeded the amount used for food and was almost 3 times the level of feed use in the LDC's. Since 1964-66, except perhaps in recent months, the use of cereals for feed has continued to increase. Output of grain has fluctuated with weather and Government policies but has tended to increase faster than population on a world basis. Use of grain has fluctuated less than production and has shown practically the same upward trend per capita as output, the effect of stock changes being small.

In the United States the quantity of grains used for food per capita has been declining since 1909. Other developed countries have similar long-term downtrends in food use of grain per person. Among poor countries there is an opposite trend; grains are substituted for potatoes or other root crops and the total calorie intake per person is raised as income permits. (Charles A. Gibbons)

Implications for Food Reserve and Food Aid Policies

As a result of the recent world food situation, and particularly the tightness in grain supplies, there has been widespread concern about adequacy of food supplies and price levels. Government officials and heads of international organizations are urging that consideration be given to the adoption of grain reserve policies and other contingency plans as a means of averting future shortages and unstable prices of these basic foodstuffs.

In recent years there has been a depletion of world grain stocks, which has had and could continue to have a significant effect on grain prices. Wheat

Table 17. Calories per person per day from 11 food groups, 1964-66 average

Region	Total	Cereals	Starchy crops	Sugar	Pulses, nuts & cocoa	Vegetables	Fruit	Meat	Eggs	Fish	Milk	Fats & oils
DEVELOPED												
United States	3,156	649	95	513	103	73	101	598	71	26	397	530
Canada	3,142	670	155	520	73	62	101	622	57	23	378	481
Australia & N. Zealand ..	3,192	821	101	550	61	47	102	655	52	23	403	377
U.S.S.R.	3,182	1,544	265	412	60	41	27	240	27	21	252	293
EC-9	3,111	878	179	391	68	59	109	474	50	30	305	568
Eastern Europe	3,080	1,498	183	307	59	49	58	314	31	13	189	379
Japan	2,416	1,397	134	197	146	90	53	53	38	85	62	174
South Africa	2,732	1,583	33	403	55	14	37	254	11	28	147	167
Other Western Europe ...	2,897	978	191	304	103	69	126	288	38	50	267	483
AVERAGE	3,043	1,127	175	388	82	59	76	371	44	32	270	419
LESS DEVELOPED												
Argentina	2,885	999	180	378	28	30	88	614	24	12	206	326
Mexico & Cent. America ..	2,425	1,197	107	388	188	14	82	131	16	11	104	187
Other South America	2,276	898	291	363	80	23	62	203	13	21	142	180
West Asia	2,316	1,480	41	187	91	39	113	78	7	4	91	185
China	2,045	1,383	224	35	134	33	6	134	12	14	5	65
Brazil	2,541	861	410	401	312	11	48	203	18	13	135	129
East Asia & Pacific	1,969	1,271	245	99	107	27	31	58	7	31	8	85
North Africa	2,290	1,461	104	198	72	43	67	69	5	6	78	187
South Asia	1,975	1,300	29	192	176	35	26	8	1	5	89	114
Southeast Asia	2,121	1,589	70	84	78	29	58	77	8	39	18	71
Africa South of Sahara ..	2,154	1,109	568	53	180	13	18	61	3	13	32	104
AVERAGE	2,097	1,300	191	135	146	30	30	89	8	13	50	105
WORLD	2,386	1,247	186	212	127	39	44	175	19	19	117	201

Source: FAO Food Balances 1964-66.

stocks on July 1, 1973, in the four major exporting countries were at the lowest level in two decades, and coarse grain stocks were the lowest since 1967. Recent crop estimates indicate record harvests in many countries, including the United States and the Soviet Union, although it is unlikely that stocks will be immediately rebuilt. Thus, world grain supplies will be especially dependent on current and upcoming harvests, which could present a precarious situation if there are crop failures in a few key countries.

In the past, there have been adequate reserves in the United States to meet almost any food shortage. Grain stocks were accumulated as a result of farm programs designed to raise farm incomes. Public Law 480 was enacted as a vehicle for aiding needy countries while at the same time reducing expensive surpluses. Since 1954 the United States has shipped some \$25 billion of agricultural commodities under long term concessional credit arrangements or outright grants. With the depletion of farm surpluses and stocks in the United States and the change in domestic farm legislation to orient supply to market conditions, there may be a change in the role of the United States as being the world's residual supplier of agricultural commodities. Thus, the future mechanism for aiding food deficit countries is still uncertain, although the United States is promising to meet its commitment to come to the aid of needy people in developing countries. At the same time, countries which are commercial importers of U.S. agricultural commodities are being alerted that they may have to bear more of the burden of stockholding to meet their own needs.

To deal with the problems of shortages of grain supplies in the future, the Director General of the Food and Agriculture Organization proposed a new initiative for international action to assure an adequate food supply. The principles and objectives of this proposal, as well as Secretary of State Kissinger's call for a World Food Conference next year, recently received endorsement by FAO member countries. An agreed upon text for the international undertaking on world food security is being prepared and will be offered for adoption by governments at "the earliest possible date."

FAO believes that what has recently taken place in world supply and demand could be a continuing problem as a result of recurrent crop failures and population pressures. The major aim of the FAO proposal is for a minimum level world food security that could be met through coordination of national stocks policies. The proposal specifies four main elements: (1) recognition by governments of a common responsibility to assure through national stockholding the availability of sufficient world grain supplies to avoid acute shortages, (2) regular intergovernmental consultations to review the world's food position and recommend suitable action if needed, (3) formulation and recommendation of

grain reserve policies to national governments, (4) an international program of assistance for developing countries who wish to maintain a minimum national food reserve.

If properly implemented by all major exporting and importing countries, including the Soviet Union, the FAO proposal could have the merit of reducing the probability of future acute food shortages and moderating severe price instability, while at the same time not overburdening a few national governments with the cost of holding reserves for the whole world. (W. Scott Steele)

Outlook

Levels of demand, production, and trade of food grains and coarse grains have been projected to 1985 (see tables 18 and 19). Two alternative levels are suggested, both of which project steady long-term growth in world demand for livestock feeds. The first is based upon the conservative assumption of continued growth in import demand, constrained by high prices and policies of major importing countries to attain self-sufficiency—essentially a return to trends established prior to 1972. The second is a high-demand alternative which assumes that animal production will be encouraged in grain-importing countries, leading to heightened demand for feedstuffs.

The inputs to this analysis were growth rates for population and income, demand and supply price elasticities, and assumptions about basic underlying economic trends and policy constraints. The medium variant of the UN population projections is used, while the world economy is posited to continue to grow at the rapid rate of recent decades. The analysis assumes an annual rate of price inflation for the United States of 3 percent, and nearly 4 percent for the rest of the world. Normal weather (i.e., average conditions which cancel out both unusually poor or good years) is assumed. An attempt is made to take into account trends in tastes and preferences in consumption, such as increasing desire for livestock products as peoples' incomes rise; changes in resource constraints; and trends in yield growth which try to capture the effect so far of the "green revolution." Unless otherwise specified, an essential continuity in present policies guiding domestic production, consumption, and international trade is assumed.

The conservative assumptions of *Alternative I* imply that the world's capacity for production of cereals will increase faster than consumption and that there could be a rebuilding of grain stocks, downward pressure on prices, or possibly programs to restrict production in the major exporting countries, or some combination of these. Under this *Alternative* the enlarged European Community

Table 18--World total: Production, disappearance and net trade
of grains (wheat, coarse grains and milled rice), 1969-71 and 1985

Country and region	1969-71			1985 Alternative I			1985 Alt. II
	Prod.	Disap.	Net trade <u>1/</u>	Prod.	Disap.	Net trade <u>1/</u>	Net trade <u>1/</u> <u>2/</u>
Million metric tons							
Developed							
United States	208.7	168.3	39.3	286.0	232.4	53.7	79.8
Canada	34.8	22.4	14.7	46.0	26.1	19.9	20.9
EC-9	93.2	110.4	-16.6	133.5	135.2	-1.7	-8.4
O.W. Europe	29.0	3.9	-5.0	37.8	44.0	-6.2	-6.7
Japan	12.7	28.2	-14.4	11.5	46.6	-35.1	-37.1
Aust. & N.Z.	14.9	6.0	10.8	22.7	8.5	14.1	14.9
South Africa	10.1	6.9	1.2	14.9	10.8	4.1	4.3
Total	403.4	376.1	30.0	552.4	503.6	48.8	67.7
Communist							
East. Europe	75.0	82.2	-7.3	102.9	104.0	-1.2	-5.2
USSR	168.8	164.9	4.0	227.3	227.6	-.3	-8.3
China	159.3	162.4	-3.1	209.7	214.0	-4.2	-5.2
Total	403.1	409.5	-6.4	539.9	545.6	-5.7	-18.7
Less developed							
Mexico & Cent. Am.	16.0	18.0	-1.8	25.3	30.2	-4.9	-5.9
Brazil	20.6	21.7	-.7	31.3	33.3	-2.0	-2.0
Argentina	19.3	10.7	8.3	25.6	12.9	12.6	13.7
O.S. America	7.6	10.8	-3.1	9.6	17.0	-6.9	-7.5
North Africa	15.0	18.3	-3.3	23.0	33.3	-10.3	-10.8
Central Africa	30.7	31.8	-1.0	40.2	44.6	-4.4	-5.4
West Asia	29.4	34.2	-5.1	36.1	47.3	-11.2	-12.7
South Asia	114.1	118.0	-4.7	180.0	188.8	-8.7	-9.7
S.E. Asia	25.6	22.0	3.6	40.8	34.6	6.1	6.1
East Asia, Pac.	31.2	38.4	-7.7	47.6	60.9	-13.2	-14.6
Total	309.5	323.9	-15.5	459.5	502.9	-42.9	-48.8
World total	1,116.0	1,109.5	8.1	1,551.8	1,552.1	.2	.2

1/ Net trade may not equal the difference between production and disappearance because of stock changes. Minus indicates net imports.

2/ Alternative II was done for coarse grains only.

Table 19.--World per capita production and disappearance of grains
(wheat, coarse grains and milled rice), 1969-71 and 1985

Country and region	1969-71		1985 Alternative I	
	Production	Disappearance	Production	Disappearance
	----- Kilograms per person -----			
Developed				
United States.....	1,005	811	1,131	919
Canada.....	1,634	1,049	1,682	954
EC-9.....	369	437	79	485
O.W. Europe.....	354	413	406	473
Japan.....	122	270	94	380
Aust. & N.Z.....	974	395	1,097	411
South Africa.....	419	286	420	304
Total.....	570	532	665	606
Communist				
East. Europe.....	597	655	718	726
U.S.S.R.	695	679	792	793
China.....	190	194	197	201
Total.....	334	340	361	365
Less developed				
Mexico & Cent. Am. :	171	179	171	204
Brazil.....	218	233	216	229
Argentina.....	798	444	865	436
O.S. America.....	105	148	84	148
North Africa.....	175	214	166	241
Central Africa.....	129	134	113	125
West				
West Asia.....	266	309	209	273
South Asia.....	159	164	169	177
S.E. Asia.....	226	194	248	210
East Asia, Pac.....	129	159	129	165
Total.....	173	181	170	186
World Total.....	301	299	309	309

Source: Computed from data in table 18.

would be expected to approach self-sufficiency in grains as would Eastern Europe, and the USSR, even though they are currently substantial importers of feed grains. The continuation of policies to maintain high grain prices in the EC-9 would encourage feed manufacturers there to substitute protein supplements and other non-grain feeds for grain. This in turn would substantially increase the demand for soybeans since fishmeal production, at best, probably will continue to expand at considerably less than the rate of the last decade. China would likely import wheat and export rice. Japan would remain the largest single import market for wheat and coarse grains.

The high demand *Alternative II* projection attempts to anticipate what would happen should world demand grow more rapidly than suggested under *Alternative I* by incorporating the following additional assumptions:

- The USSR and Eastern Europe attempt to increase livestock production and consumption at a faster rate of growth even if it means importing grain and high overall levels of trade with the western world;
- The People's Republic of China becomes more trade oriented and imports more grain to improve city diets;
- The enlarged European community finds it advantageous not to pursue as strongly its self-sufficiency policy by setting lower price targets for production, thus permitting continued imports of grain;
- The livestock economies, particularly poultry, of the developing world grow faster, either in countries with enhanced petroleum revenues, or in countries with unexpectedly higher rates of economic growth;
- And fishmeal production stagnates at the 1969-71 level.

The higher demand for livestock products under *Alternative II* should translate essentially into a substantial increase in demand for coarse grains and oilseed meal with some impact on the demand for wheat. Higher feed prices would encourage more feeding of wheat in the developed countries, particularly Western Europe where wheat competes well with barley for feed use. The projections suggest that the United States could meet nearly all the increase import demand for coarse grains, with U.S. export of feed grains reaching 56 million metric tons, or about 25 million tons higher than under *Alternative I*. The largest part of the growth in import demand for oilseed meal would be expected to be supplied by the United States, although other traditional suppliers, such as Brazil, would likely play a large part. Under *Alternative II*, U.S. soybean exports are projected at 30.6 million tons, 5.8 million tons more than the *Alternative I* projection.

Under both alternatives, the consumption and

trade of wheat and rice should grow less rapidly than coarse grains because of the increasing need of feed for expanding livestock and poultry production. The analysis also suggests that countries in the developed and centrally planned parts of the world will continue to be the major producers and consumers of wheat and coarse grains. The developed exporting countries will continue to supply the less developed importing countries with grain. The developed importing countries will increase their feed grain imports to fuel growing livestock economies. Most of the less developed countries will import more wheat because their limited foreign exchange resources will cause them to give food grains priority over feed grains. However, some with abundant foreign exchange could show a rapid growth in imports of feed grains, particularly under *Alternative II*. Projected production and trade of the less developed countries should permit their per capita consumption of grains to increase slightly over the base period. But any larger increase will most likely have to come from greater domestic production rather than from larger imports. Korea and Taiwan, however, are examples of areas where little wheat is grown, but where significant growth in imports of wheat is projected.

Both alternative projections described above anticipate that the United States would supply by far the largest share of increased import demand for coarse grains, and an important share of increased import demand for wheat. A recent ERS study indicates that American farmers have the potential to substantially increase their output of major agricultural products to levels consistent with the projections. The study does not attempt to predict whether the potential will be achieved, but is intended as a profile of what might happen under a specified set of conditions, namely:

- That farm product prices in the future are favorable for increased production;
- That there are no restrictions on the use of land;
- That supplies of inputs are adequate, and that they are made available to producers at relatively favorable prices;
- That growing conditions are normal;
- And, that new agricultural science and technology will continue to come on stream at about the same rate as in past years, with neither new scientific breakthroughs nor drying up of the fountain of new knowledge.

Under these conditions, a 50-percent increase in feed grain production, a 40 percent increase in soybean output, and a doubling of rice production over 1973 could be achieved by 1985 (table 20). Part of the increase would come from expanded use of cropland, primarily from acreage formerly diverted under Federal supply management programs and from cropland pasture. But most increases in output would be expected to come from higher yields. With additional incentives, even more land could be

Columns may not add to totals because of rounding.

1/ Corn, barley, oats and grain sorghum.

Source: Economic Research Service, Commodity Economics Division

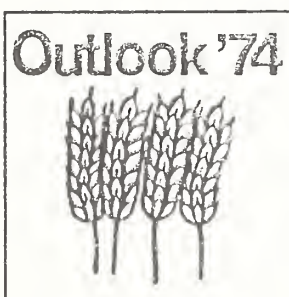
brought into production, and yields could conceivably scale higher, even with present technology. A more detailed analysis of U.S.

production potential is contained in the December 1973 issue of the ERS *Farm Index*. (Anthony S. Rojko)

OUTLOOK CONFERENCE SCHEDULED FOR DECEMBER 17-19, 1973

The National Agricultural Outlook Conference has been set for December 17 through 19, 1973, at the U.S. Department of Agriculture in Washington, D.C. This year's Conference is about 2 months earlier than usual to give farmers and farm suppliers more time to plan for 1974 food production.

The 1974 outlook for U.S. agriculture and the general economy will receive particular attention at the Conference. The outlook for farm inputs such as fuel, fertilizer, pesticides, and farm equipment will be stressed. Sessions on the 1974 outlook for major commodities will make up an important part of the Conference as usual. The Conference is sponsored by USDA's Economic Research Service, Extension Service, and Agricultural Research Service.



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